

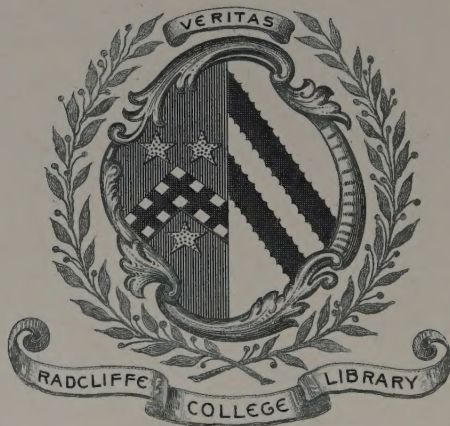
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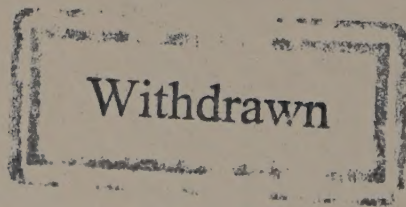


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THE GIFT OF

Anne Catherine Bezanson
Class of 1915



INDUSTRIAL RESEARCH DEPARTMENT
WHARTON SCHOOL OF FINANCE AND COMMERCE
UNIVERSITY OF PENNSYLVANIA

RESEARCH STUDIES
VI

HELP-WANTED ADVERTISING AS AN INDICATOR
OF THE DEMAND FOR LABOR

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HELP-WANTED ADVERTISING
AS AN INDICATOR OF THE
DEMAND FOR LABOR

BY

ANNE BEZANSON

*Industrial Research Department
University of Pennsylvania*



PHILADELPHIA
UNIVERSITY OF PENNSYLVANIA PRESS
1929



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Anne Catherine Beanson

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PREFACE

In this study, the Industrial Research Department makes available a summary of the help-wanted advertising in daily and Sunday newspapers in Philadelphia, showing the result of a continuous monthly analysis since April 1923. The feature of the study is the classification of advertising by the major industries and occupations.

The trend of help-wanted advertising in Philadelphia papers is also compared with that of one of the leading papers in each of six other cities. For furnishing figures of the advertising lineage in other cities we wish to thank the *Chicago Tribune*, the *Indianapolis News*, the *Minneapolis Tribune*, and the *St. Louis Globe-Democrat*; for the number of advertisements, we thank the *New York World* and the *Milwaukee Journal*.

For the first suggestion of the value of Philadelphia help-wanted advertising, we are indebted to the work of Mr. Cook, formerly of the Philadelphia Electric Company; for interest in the study and aid in collecting the data for other papers, acknowledgment is due to Mr. Kenneth Coolbaugh of the Pennsylvania State Employment Office.

Too much credit cannot be given to Mrs. Marjorie Denison and Miss Lillian Davis for the compilation of current data and indices, and for persistence in carrying the record back to the 1923 period to which other employment records dated. Much of the research in connection with the classification of industries and occupations should be credited to Miss Leda F. White and Mr. E. A. Tupper. Even with assistance, the planning of the study and the interpretation of the data have been difficult. In considering special problems, valuable suggestions were made from time to time by Professors Joseph H. Willits, J. Frederic Dewhurst, C. Canby Balderston, and Miss Miriam Hussey.

ANNE BEZANSON.

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CHAPTER I

INTRODUCTION

The purpose of this study is, first to make a comparison of the trend of help-wanted advertising in Philadelphia newspapers with that in five papers in five other industrial cities; and second, to analyze the Philadelphia data by several major industries and occupations. The object of such a study is to measure the changes in opportunities for employment in certain well-defined, and representative occupations by a record of the space devoted to advertising for persons to fill such positions. The comparison in other cities was undertaken after it was evident that the want columns in Philadelphia newspapers gave more information about changes in the demand for labor than was easily available from other sources.

The total volume of help-wanted advertising in the newspapers of the Philadelphia area has previously been used in several ways in the study of industrial and civic problems. It was first used in an attempt to obtain a continuous indication of the probable future expansion of the city. It has since been widely used by trade associations, public utilities, and large-scale enterprises as a general indicator of the employment situation in the market. In this study it is used again to trace the changes in demand for various wage-earning groups.

The study was prompted by the discussion of conditions of employment in the Philadelphia market in the middle of 1923. During the boom of the first half of that year, labor turnover rates were especially high, employers in many industries claimed to be unable to expand their working staffs to meet the needs of production, and wage rates rose to the levels of 1920 and even higher in some occupa-

tions. The uncertainty about the numbers employed and the numbers seeking employment was enhanced by the decline in shipbuilding and many other industries expanded by the war, by the rise of some new industries, and by the southward shift evident in textiles. Despite the activity of 1923, it was known that there were fewer employees on industrial payrolls than in 1920 but the extent to which workers had left the area in the depression of 1921, or the changes in occupational distribution caused by the new industries were arrived at only by swapping guesses. Before midsummer the whole problem changed. Employees were laid off in large numbers, and the whole discussion turned to speculation about the number unemployed.

In the midst of this discussion about conditions of employment the writer was consulted about some of the problems involved in constructing a general index of help-wanted advertising. It occurred to us that, if the general index of advertising followed the course of business activity, then an index classified by occupations might be useful in showing the opportunities for employment in some of the different trades.

The results here presented include, first, the general trend of all help-wanted advertising and, second, the separate trends in advertising for men and for women in five industrial cities, viz., Chicago, Indianapolis, Minneapolis, Philadelphia and St. Louis. Furthermore, wherever the necessary data were available, the trends in help-wanted advertising have been compared with the trends in employment and labor turnover. It is in the latter part of the study that the most important original contributions will be found when the variations from the general trend of the demand for labor in certain specific industries are considered.

This demand is studied in six major industries—building construction; automobile manufacture; metal manufacture, ferrous and non-ferrous; hosiery and knit goods manufacture; and other textile manufactures—and in twenty-two specialized occupations. Some of the occupations separately

classified are included in the above-mentioned industries; some are general occupations not peculiar to any one industry, such as common laboring, clerical and domestic and household work, and canvassing and selling. In each of the major industries, the demand for selected skilled and semi-skilled occupations is compared with the total demand for the industry. The object of this comparison is to show whether the demand affects equally all wage groups, or whether there is a scarcity or a surplus in some occupations.

Primarily this analysis deals only with help-wanted advertising, or the unfilled demand. The reverse side of the employment situation, however, is to be found in the advertisements of positions wanted, and an analysis of the advertisements both of help wanted and situations wanted in the *New York World* is given in Chapter XI.

The unit of measurement employed in this study (with the exceptions noted) is the printed line, and the space devoted to display advertisements for help has been converted into terms of printed lines. The index numbers used represent the average weekly advertising in each month from 1923 to date. The data for Philadelphia cover the period from 1923 through August 1929; in most of the other cities the records start in 1922. The method used in classifying and compiling the data is explained in the appendix; here it is necessary to note merely that all the records are based on advertising space—linage of advertising, not numbers of advertisements.

The principal conclusions reached may now be summarized. Our study shows that, whether employers are located in Chicago, Indianapolis, Minneapolis, Philadelphia, or St. Louis, they will resort to help-wanted advertising in periods of activity in about the same way. The records start in a year in which the volume of advertising was exceptionally high in all centers. In the three periods of activity covered by our series, broken by two recessions, the fluctuations in all areas have been strikingly similar. Advertising in Chicago is more moderate in peak periods than in

the other areas, showing either less scarcity of labor or some control of display advertising; Indianapolis and St. Louis have the most extreme peaks. At the present time an improvement in employment is shown in all areas by a gradual increase in advertising, most marked in Indianapolis, least in Philadelphia.

The comparisons of the help-wanted indices for men and women in these areas show that, in busy periods, the advertising for women increases more sharply than that for men. This phenomenon we have attempted to explain by an analysis of the changes in the demand of occupations normally employing women, and from this indirect test conclude that in peak periods part of the demand is from other sources and consequently a wider choice of occupations is open to women in active periods than in inactive.

It was found that about one-tenth of the total advertising was for domestic and household workers. The space used for domestic advertising increases in periods when other advertising is rising, but it does not increase as fast as the total, nor does it decrease as much as the total in dull periods. In fact, in Philadelphia, the absolute number of lines of domestic advertising was about the same in the dull year of 1924 as in the two following more active years. The problem in the domestic demand is not the average variation from year to year but the transient character of the positions filled within the year. The opportunities for employment vary with vacation and holiday periods.

The most significant findings are contained in the chapters dealing with the demand in industries and key occupations. The curves of the *building* industry show:

1. The well-recognized recruiting of the spring months, but in addition a period of scarcity of building employees in autumn before the building season ends.
2. A balanced demand for the various grades of labor employed.
3. A relatively low level of advertising in recent years. It would seem that the scarcity of the autumn months could

easily be minimized by co-operation within the industry and with other industries in the area. The temporary scarcity of labor in building comes at a time when automobile plants and many others lay off large numbers of men. In so far as the building industry needs unskilled workers, a transfer of workers may be possible. But could not some of the demand for skilled workers be filled by transfer from contractors completing jobs? Even if such a transfer is possible on only a small scale, it would be an aid to stability and save some idle time between jobs.

The curves of employment in the *automotive* and *metal* industries are also compared with advertising. Since the beginning of 1923 there have been two periods in these industries when advertising was relatively far above employment (in the spring of 1923 and again in 1926). The rise of both advertising and employment in 1929 resembles the situation shown in these two periods. The difference is that in 1923 and 1926 there was a scarcity of unskilled and semi-skilled workers even greater than was felt in skilled trades, whereas at present there is a surplus of unskilled employees and an acute shortage in a few skilled occupations, such as the tool-making and machinist's trades.

The change in occupational advertising indicates, first, that in recent years, with the shift in production, especially noticeable in airplane and electrical work, the demand for certain skilled occupations has increased; second, that the incidence of occupational shortage is not predictable from one active period to another. Even in the seven-year period of this study, technical and manufacturing changes have been rapid enough to act unevenly upon the different wage-earning groups in the industry.

To indicate that advertising data are valuable in supplementing other personnel data, a comparison has been made for *metal-working* concerns of the indices of the number of workers on the payroll, the labor turnover, accessions, and advertising. The comparison shows that in periods of contraction in employment, the index of advertising drops

precipitously, the index of entrances follows, and the index of turnover lags behind the others, continuing downward after the other curves have turned the corner; in upswings, the index of entrances precedes all others, but the advertising index soon overtakes it and rises higher than either the turnover or the entrance index in the peak of activity. The advertising index, then, is the most sensitive of the indicators of changes in the personnel of this industry.

Until recent months, the trend of employment in the *textile* industry, has been downward since 1923. Advertising for employees has consequently not been proportionate to the numbers dependent upon the industry in any period of our study. The demand has been spotty even in the hosiery branch of the industry.

One of the most conclusive, and also one of the most disturbing, findings of the study concerns the advertising for laborers. For the past three years the advertising for unskilled male labor has been negligible. Help-wanted advertising has undergone a complete change in this seven-year period. At the beginning, unskilled labor was the kind most in demand; at the end of the period, this advertising had decreased until it was but a trifle over one-fourth of the amount appearing in 1923. Quantitatively, the decrease is indicated by the fact that in 1923, 41 help-wanted lines out of every thousand asked for laborers, whereas by 1929 the occupation used only 11 lines out of every thousand.

With these specific findings in mind, we may now consider the significance and usefulness of the indices of help-wanted advertising.

CHAPTER II

THE SIGNIFICANCE OF AN INDEX OF HELP-WANTED ADVERTISING

While this study is an attempt to show the significance of a record of changes in the demand for labor, it is concerned with data which measure only part of the total demand.

At any given time, the total demand for labor is represented by the number of employees at work plus the number the employers are willing to hire at the current rates. If these data were available, we should have a measure of such wants as can be foreseen. But the record of demand is scattered among many sources and in no way easy to appraise. The most urgent part of the unfilled demand in a locality is indicated by help-wanted advertising in the newspapers in that area.

This study is an attempt to use the amount of newspaper help-wanted advertising as a measure of the unfilled demand for labor. Since such advertising has been widely used by employers in all industries, it provides the basis for an indicator of general usefulness to personnel managers and other executives in the locality.

The advantages of the advertising data are, first, that they represent all types of demand—the household in need of temporary assistance, the small plant with an occasional placement to make as well as the large-scale enterprise with its numerous vacancies; and second, the kind of labor sought and the industry seeking are normally definitely stated. The special significance of a help-wanted index is, then, that it provides an objective measure of changes in the unfilled demand both for the market as a whole and for specialized occupations.

To the executive of the individual business who is responsible for maintaining an effective labor supply it is useful:

1. To assist him in judging the tendencies in the demand for the types of labor which he employs, and to plan for future needs both in placement and training.
2. To aid him in appraising the difficulty of obtaining recruits and adjusting starting rates.

In other words, to the executive of an individual plant, a classified index of help-wanted advertising provides information of especial significance in periods of rapid changes in demand.

For employers collectively, a classified help-wanted index should aid in long-run planning. It provides a basis, or at least a partial basis, on which manufacturers' associations and chambers of commerce can plan a budget of future community needs. Such a budget would be invaluable to schools, training departments, and all those concerned with vocational-guidance work. For employers collectively, a budgeting of demand aids in adjustment, since the index of advertising changes before other employment indicators. It thus permits an estimate of the scarcity in an occupation to be made in time to take steps to attract labor from other markets or perhaps to lead employers to adjust their own demand by upgrading from allied occupations.

For the economist, the index of advertising provides, so far as is known to us, the first objective measure of the unfilled demand for labor which is representative not only of the general demand but of that for specialized kinds of skill and training. The general demand of an industry gives little idea of the way in which occupational groups are disturbed by up and down swings in employment. It seems to be agreed that, as employment dwindles, the less skilled and the new employees are the first to be laid off by plants. Little is definitely known of the way in which an increase in demand first appears. Does the recruiting of skilled occupations come somewhat late in the up-swing? What occupations are first in demand? Is there any uniformity in the

way in which occupational demand manifests itself in periods of activity, or does the building-up process reverse the order of lay-offs? It is difficult to get even an indirect measure of surplus or scarcity. The index of advertising is only a partial measure of effective demand. Although it is not a complete indicator of scarcity, which a classified index of situations wanted would measure inversely, its movement up or down reflects the influence of scarcity on the market demand.

To those engaged in training and placement, the study of the positions offered through advertising gives an indication of the extent to which those engaged in a given trade are fully employed.

Fundamenally, the study of employment is concerned with questions more far-reaching than the mere meeting of this or that up-swing in business. The total employment and demand in an industry can be used to show the general direction of industrial growth. On the other hand, the study of occupational employment deals with two major problems. The first and more important is the maintenance of an adequate balance among the multiplicity of occupations used in any modern industry; the second is concerned with the most effective way of making adjustments between occupations in periods of sudden changes. In any modern industry undergoing rapid technical change, one occupation is likely to become temporarily somewhat over-supplied or under-supplied with trained employees.

In large measure the problem which faces both the employer and the worker is the distribution of labor in particular occupations rather than the distribution of labor *in general*. In temporary adjustments, the problem is one of being aware of the sections of the industry that are active or depressed; in long-run adjustments, the problem is one of anticipating the effect of industrial changes upon the distribution of occupations in the industry.

Except under conditions of extreme unemployment, the worker is not just "looking for work." He is concerned

with knowing the opportunity that will most adequately use his experience and training. Furthermore, the problem of supplying the most effective training concerns the whole community.

One need not stress the significance of a knowledge of local conditions of employment to social agencies and placement bureaus; such data are available in countries with centralized labor exchanges where both the number of positions offered and number of applicants are recorded. The lack of a central record in industrial cities in the United States gives a special significance to the indirect measure of demand furnished by advertising.

One of the difficulties of maintaining such a continuous record of employment data arises from the fact that the interest of different groups varies as the employment situation changes. To employers the supply of labor is a more pressing matter in times of increasing demand; to social agencies, confronted with the urgency of bridging the gap between incomes and need, periods of interruption in business activity create the most serious problems. No statistical data can have equal interest to all groups at the same time.

CHAPTER III

COMPARISON OF HELP-WANTED ADVERTISING IN FIVE INDUSTRIAL CENTERS

From the lineage of help-wanted advertising made available by one of the leading daily papers in Chicago, Indianapolis, Minneapolis, and St. Louis, indices have been constructed, on the basis of the average weekly advertising per month in these areas during 1926, for comparison with the data for the Philadelphia papers. The basis of comparison is the average weekly number of lines in each area.

TABLE I
AVERAGE WEEKLY NUMBER OF LINES OF HELP-WANTED ADVERTISING
ANNUALLY BY CITIES

1922-1929

| | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929* |
|--------------------------------------------------------------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|
| <i>Chicago Tribune</i> | | 47,203 | 30,114 | 38,977 | 42,563 | 34,984 | 29,746 | |
| <i>Indianapolis News</i> | 7,762 | 8,865 | 4,737 | 5,325 | 5,559 | 4,036 | 3,763 | |
| <i>Minneapolis Tribune</i> .. | 9,841 | 9,351 | 7,067 | 7,241 | 7,446 | 6,531 | 6,877 | |
| <i>Philadelphia Inquirer,</i> <i>Evening Bulletin and</i> <i>Public Ledger</i> | | 61,393 | 36,380 | 42,556 | 48,611 | 31,967 | 29,129 | 32,173 |
| <i>St. Louis Globe-Demo-</i> <i>crat</i> | 9,447 | 10,138 | 5,993 | 6,485 | 5,949 | 4,608 | 4,437 | |

* Six months' average.

It is evident that there is a substantial amount of advertising in each area. In some periods the *Chicago Tribune* has filled more help-wanted space than all the Philadelphia papers combined.

The monthly indices of advertising in these areas, adjusted for variations in the length of the months, are shown on Charts I and II. Considering the fact that no attempt was made to select similar industrial areas, and that only one paper was used in each city outside of Philadelphia, the

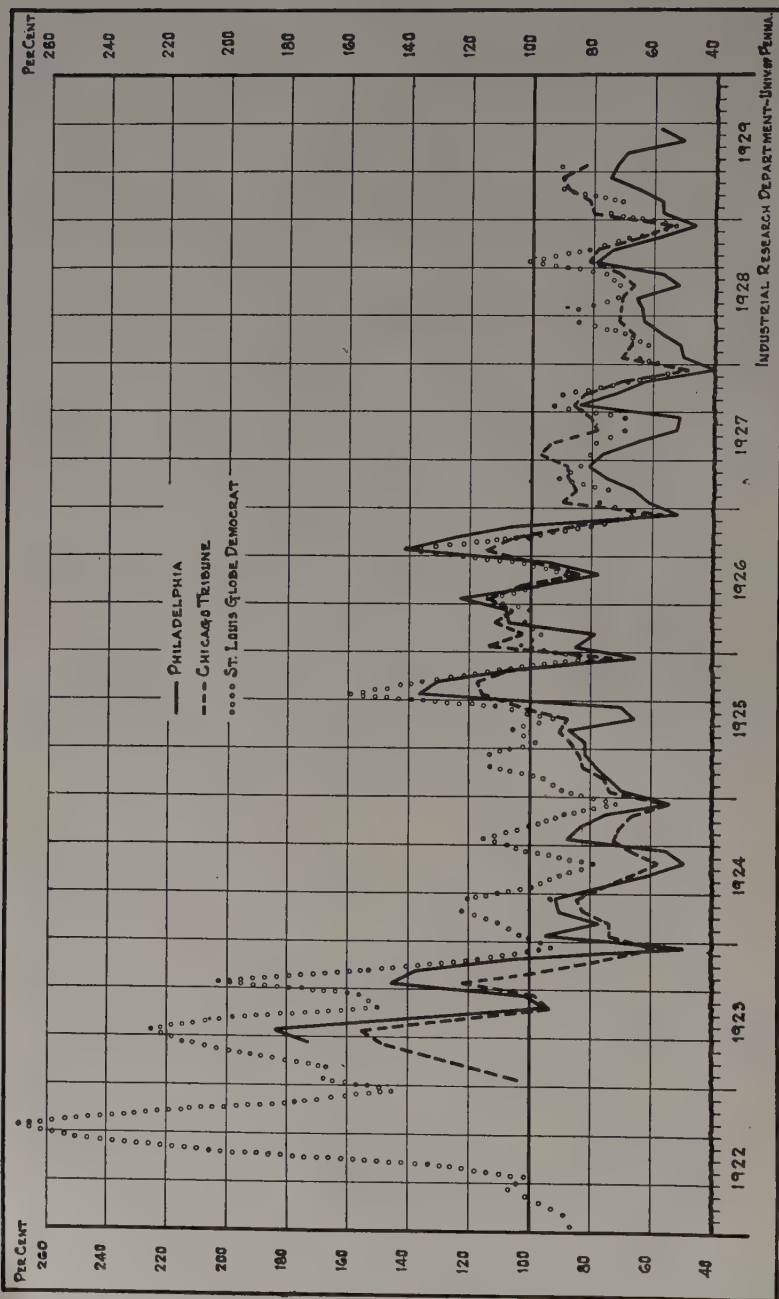


CHART I. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING—PHILADELPHIA, CHICAGO, ST. LOUIS
(BASE-AVERAGE OF 1926).

general conformity of this curve is very striking. The fluctuations are similarly timed in both peaks and dips.

The years covered by these series may be divided into three periods. The first shows one-half of the short cycle, viz., the downward swing, of which May 1923 was the peak. Between 1925 and 1927 a complete short cycle is apparent in an upward movement in 1925, a high level of activity in 1926, and in 1927 a gradual recession to even lower levels of demand than were evident in 1924. An upward movement, not yet complete, is revealed by the data since the beginning of 1928.

The same fluctuations are evident in all the areas; the differences lie in the amplitude of the swings, not in the direction. The curve of advertising in the *Chicago Tribune*, on Chart I, shows a more moderate amount of advertising at peaks in the demand than either the Philadelphia or the St. Louis curve. In the peak of advertising in 1923, when Philadelphia was 86 per cent and St. Louis 126 per cent above their 1926 averages, Chicago was but 55 per cent above. On the other hand, the general level of advertising is at present proportionately higher in Chicago than in Philadelphia.

The advertising in Minneapolis and Indianapolis is shown with the Philadelphia curve in Chart II.

Here again there is a marked conformity in the curves, though the timing is not quite so close as the relationships in Chart I for Chicago, Philadelphia, and St. Louis. Even in these curves, there are few cases where the movement is in opposite directions. The difference is that one area, often Minneapolis, takes two months to attain a peak which the others reach in a single month.

In all areas the trend of 1929 is upward and the indices are above the levels of the two previous years. By May, Indianapolis and St. Louis were about 10 per cent below the average of 1926, Chicago 18 per cent and Philadelphia 30 per cent below, while Minneapolis was about 10 per cent above its 1926 average. Of the five areas, Minneapolis is

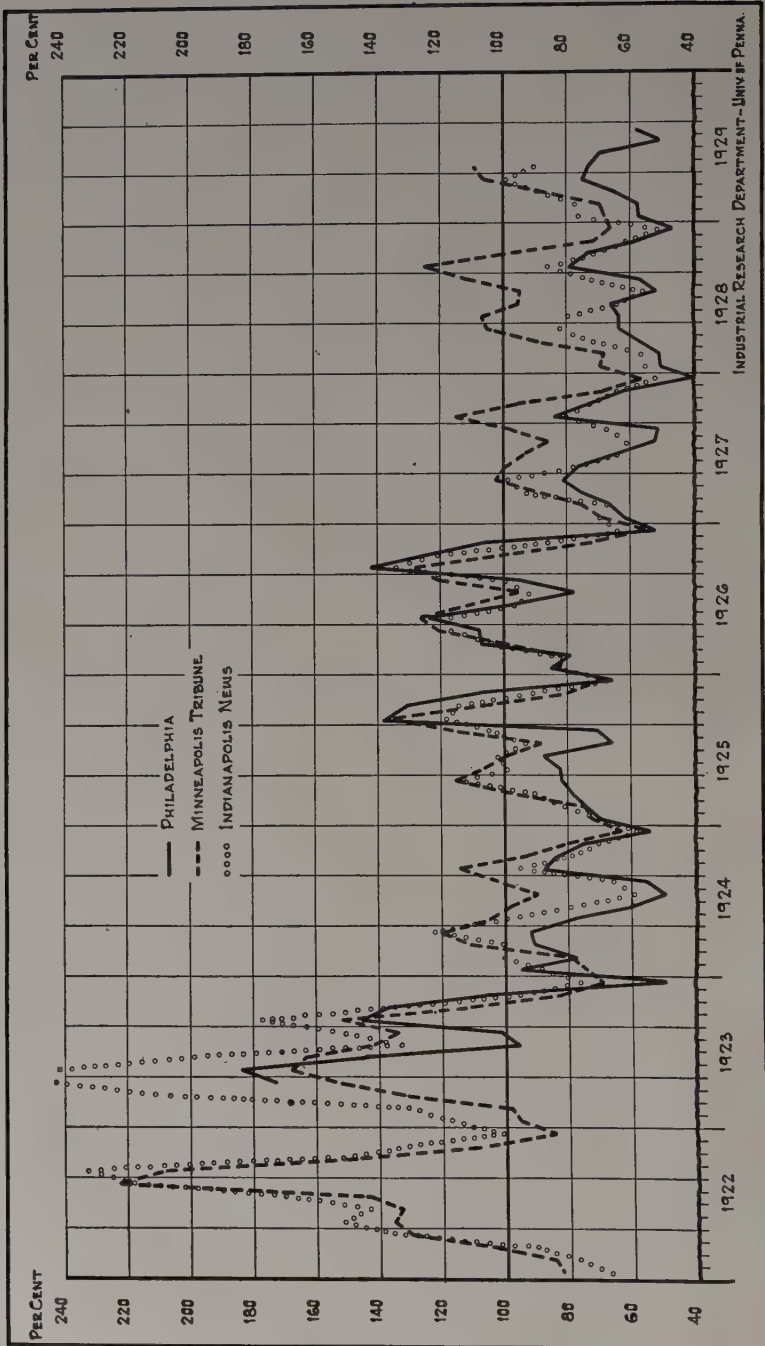


CHART II. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING—PHILADELPHIA, MINNEAPOLIS, INDIANAPOLIS
(BASE-AVERAGE OF 1926).

then the only one which in the spring peak of advertising reached the height of the average monthly totals of 1926.

Each area shows a seasonal lull in advertising in mid-summer and a still more marked decline in December. The high peaks of each year are in April or May and again in September, but in the years considered, high and low peaks tend to occur in all areas at the same time.

Doubtless the amount of help-wanted advertising in any city depends upon the existence of employment exchanges and other placement agencies. Changes in the amount, however, show the ease or difficulty of finding employment in the area. The conformity of the curves for five industrial centers shows that the curves are influenced by general business conditions. Would not the regular publication of these data by the local papers give a better idea of the demand for labor than is easily available from other sources?

CHAPTER IV

COMPARISON OF FLUCTUATIONS IN ADVERTISING FOR MEN AND WOMEN

The number of lines in the Philadelphia papers devoted to advertising for men and for women differs somewhat from the proportion of men and women employed. In 1926, 64.5 per cent of the help-wanted space was devoted to advertising for men and 35.5 to advertising for women. The census of 1920 reported that 603,237 men and 215,763 women were "engaged in gainful occupations in Philadelphia." Assuming that the ratio of the two groups has remained unchanged, women would account for about one-fourth (26 per cent) of the employment and more than one-third of the advertising.

In other cities for which the lineage is available, the advertising for men is from 65 to 70 per cent of the total.

TABLE 2
PERCENTAGE OF TOTAL LINEAGE AND TOTAL NUMBER OF ADVERTISEMENTS
DUE TO ADVERTISING FOR MEN
ANNUALLY BY CITIES
1922-1928

| | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---------------------------------------------------------|------|------|------|------|------|------|------|
| <i>Linage</i> | | | | | | | |
| <i>Chicago Tribune</i> | | 60 | 68 | 70 | 70 | 70 | 70 |
| <i>Indianapolis News</i> | 71 | 65 | 67 | 70 | 67 | 66 | 68 |
| <i>Minneapolis Tribune</i> | 70 | 65 | 65 | 64 | 65 | 64 | 63 |
| <i>Philadelphia Inquirer, Bulletin and Ledger</i> | | 62 | 59 | 62 | 64 | 63 | 68 |
| <i>St. Louis Globe-Democrat</i> | 73 | 64 | 67 | 69 | 69 | 70 | 70 |
| <i>Advertising</i> | | | | | | | |
| <i>New York World</i> | 61 | 62 | 60 | 61 | 63 | 58 | 56 |
| <i>Milwaukee Journal</i> | 53 | 55 | 56 | 58 | 58 | 56 | 59 |

Normally the advertising for men amounts to about two-thirds of the total in all areas. In all cases, this proportion

changes in active periods. For instance, in Chicago, where the relative advertising for men and women has been almost in balance for the past five years, the advertising for women in the peak of 1923 was 117 per cent above the 1926 average, though the peak of lineage for men was only 33 per cent above 1926. Does this indicate that women are substituted for men in busy periods or is the activity in the women's occupations?

Some difference in the proportion of advertising for men and for women in the various cities would be accounted for by the number of domestic and clerical employment offices and other special methods of placement. Of the five cities reporting lineage, Minneapolis has regularly the highest proportion of advertising for women. In the spring peaks of each year the curve of advertising for women far exceeds that for men. A study of the Minneapolis curves indicates that at most times it is relatively easy for women to find employment.

The Minneapolis situation offers a complete contrast to that which prevails in Philadelphia. In 1923, the local advertising for women was slightly more active than for men and lasted a trifle longer. Again in 1924 the demand for women was relatively greater than that for men. But in the depression in textiles of the last two years the distance between the curves has been narrowed and the curve for women has dropped lower than the men's curve. In the first half of 1928, as is usual in the spring months, the gap was especially wide. In May the advertising for men increased about 3 per cent; that for women decreased more than 4 per cent. Since then the movements of the two curves have been more nearly parallel, with a tendency for the women's curve to remain below the men's.

The salient fact in the Philadelphia help-wanted columns, for the past two years, is the moderate amount of advertising. In fact, the low levels of these years have no parallel even in the depression of 1924, and the index of 1929, though tending upward, is yet far below corresponding

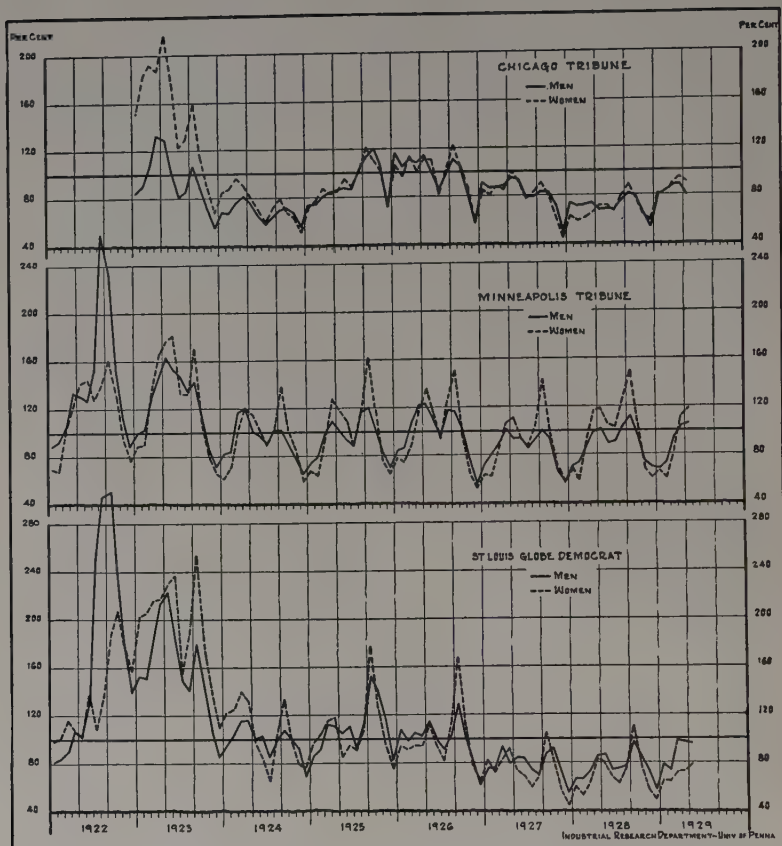


CHART III. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR MEN AND WOMEN—CHICAGO, MINNEAPOLIS, ST. LOUIS (BASE-AVERAGE OF 1926).

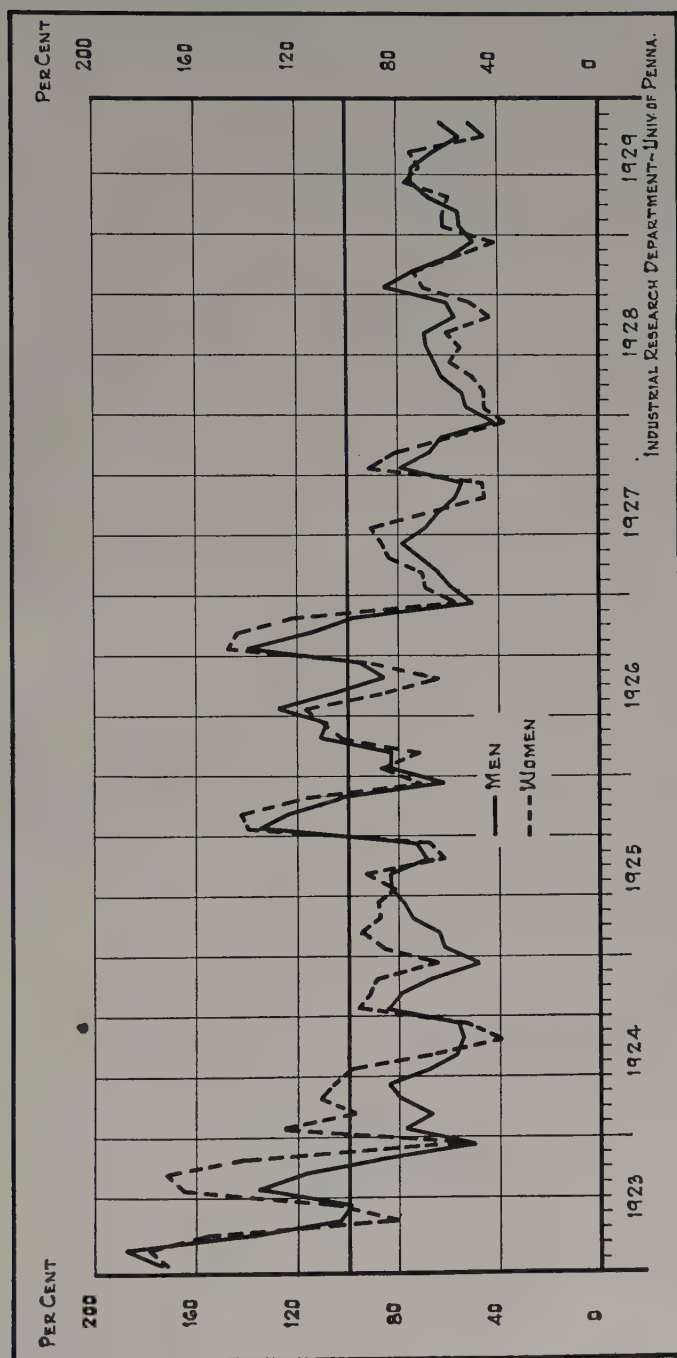


CHART IV. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR MEN AND WOMEN—PHILADELPHIA
(BASE-AVERAGE OF 1926).

months in the past five years with the advertising for women relatively less than that for men in all months since November 1927.

In so far as the advertising for men and women reflects the demand of different industries, the fluctuations in the curves of advertising might be expected to be very dissimilar. As a matter of fact, however, the demand is normally fairly well balanced.

Nothing shows more clearly the lack of detailed study of the demand for labor than our inability to explain the peaks in the lineage of advertising for women employees. One might say that, as wages increase in an active period, there is a tendency to substitute women for men; one might argue that the increase in consumer purchasing power creates an unusual demand in the distributive industries and domestic occupations, normally employing women; or, again, that the more complete employment of men may mean that fewer women seek employment and the increase in advertising is necessary to find the usual proportion of women employees.

Does an active period divert part of the labor of women into occupations and industries to which they are not normally drawn? This query cannot be answered from advertising figures alone, but we can determine whether the advertising for women in domestic and clerical occupations was relatively high in 1923 when other advertising was high.

Chart V shows that, at the peak of advertising in 1923, the index for domestic employees was high but not above the total. In the second peak of advertising for women in September, the lineage for domestic employees was extremely high. In both these peaks clerical advertising was only moderately high. The demand for domestic employees, then, accounts for part of the increase in advertising for women in 1923; the clerical and sales demand accounts for much less, and some part of the increase in demand came from other sources.

There are other points of interest in the curve of domestic advertising. In Philadelphia 109 lines out of every thou-

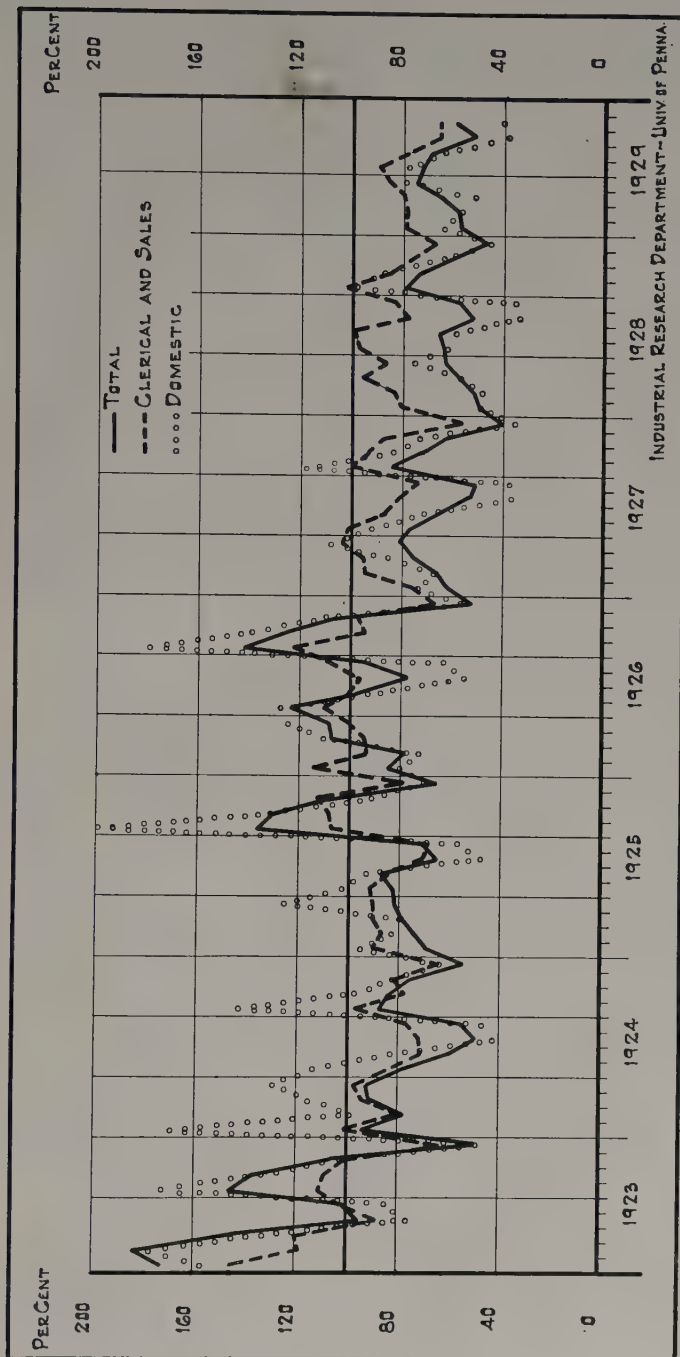


CHART V. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR DOMESTIC, CLERICAL AND SALES, AND ALL OCCUPATIONS—PHILADELPHIA (BASE-AVERAGE OF 1926).

sand in 1926 were advertisements for domestic employees and 353 for clerical and sales workers. In other years the totals of domestic advertising out of every thousand lines were:

| | | | |
|-----------|-----------|-----------|-----|
| 1923..... | 104 | 1926..... | 109 |
| 1924..... | 144 | 1927..... | 122 |
| 1925..... | 122 | 1928..... | 109 |
| | 1929..... | | 108 |

The domestic advertising, as might be expected, shows the influence of vacation and holiday periods. The volume begins to decrease in June and reaches a low point in July and August of each year. Three high peaks occur, one in early spring, one in September, and another about December or January. These seasonal irregularities are so great as to obscure the fact (with the curve in this form) that advertising for domestic employees was very close to the total curve in 1923, lower in volume in 1924 than in 1923, and measurably lower in 1927 and 1928 than in the period of active business at the end of 1925 and 1926.

The curve of domestic advertising fluctuates more violently than any other curve involving considerable numbers in our whole series. The seasonal advertising is of an emergency character and recurs each year about the same time. Over and above this seasonal fluctuation, however, there is a tendency for domestic advertising to increase amazingly during periods of pronounced activity in manufacturing industries. It is of some interest that the most drastic increases in domestic advertising occur in the early months of a period of industrial expansion. Does this mean that a fringe of domestic employees returns to factory work as soon as opportunity offers? If so, in this first period, do housekeepers attempt to live as usual and keep up a frenzied quest for domestic assistance? What accounts for the let-down in domestic want advertisements once the upward movement of industry is well established? The period of building up factory payrolls in 1925 was accompanied by an acute shortage of household workers and an unusual number

of lines of advertising of domestic work. This is not surprising. What is noteworthy is that the space devoted to this type of advertising did not continue to increase through the more pronounced industrial activity of 1926.

The chaotic and unstable character of domestic employment is illustrated by marked oscillations, both seasonal and cyclical, nor is the instability wholly evident from the data of lines of help-wanted advertising. Applicants for domestic positions make more use of the situations-wanted columns than industrial wage-earners do. Consequently, in periods of depression the lines of domestic situations-wanted advertising supply the place of help-wanted in more active industrial periods and much of the domestic demand is filled without resort to advertising by employers.

The same factor enters into a study of clerical and sales positions. Many office positions—those of stenographer, typist, billing clerk, and others—are filled by the “employee seeking the job.” This fact does not destroy the usefulness of a help-wanted index in these occupations, but it does make this index more difficult to interpret than the industrial indices. Whatever weight should be given to advertising by applicants, it is evident that the sales and clerical curve follows closely the up and down swings of the total advertising. The two curves cross each other at intervals, but there was no prolonged period from 1923 to 1926 when the area between the two curves was large. Since the beginning of 1927, advertising for clerical and sales employees has been about 30 points above the total. This excess may indicate some shortage of trained clerical employees, or it may indicate greater constancy in clerical than in industrial employment. Though the fluctuation of the clerical curve is synchronous with that of total advertising, the amplitude of the swings is not pronounced. In the activity of 1923 and again in 1925 and 1926, the clerical and sales demand tended to be relatively lower than the total. When manufacturing plants were dull in 1924, clerical and sales advertisements kept somewhat above the total. Since 1926

there has been no month when the clerical-sales curve was not above the total, and throughout 1928 and 1929 the space between the curves has tended to increase still further.

The moving average ¹ shows that the domestic advertising was relatively higher than the total from 1923 to 1926, a period when it was difficult to secure household employees. The curve has gradually dropped in line with the general curve in each month of the past two years. The opposite tendency has already been noted in clerical advertising. It

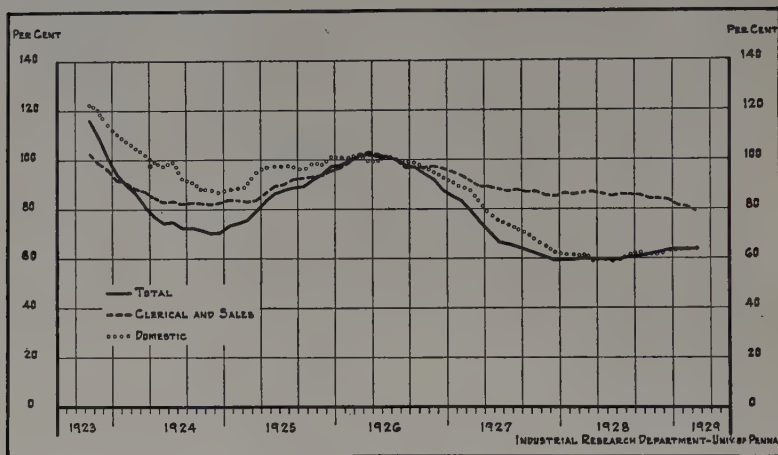


CHART VI. MOVING AVERAGE OF INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR DOMESTIC, CLERICAL AND SALES, AND ALL OCCUPATIONS—PHILADELPHIA (BASE-AVERAGE OF 1926).

has fallen off but very slightly since 1926 and for the past year the curve has moved almost horizontally when other demands were declining rapidly. The position of the curve at the present time seems to indicate some shortage in the supply of clerical or sales employees.

The separation of the advertising of those occupations for which the terminology is fairly definite seems to possess some value for an area of as varied industrial activity as

¹ To arrive at this figure the data for the first 12 months were added; each following series included the addition of a new month and the omission of the first month of the previous series of 12. The average of the calendar year is plotted at the mid-point of the series—between June and July.

Philadelphia. Except for applications at employment agencies, no other information is available to show the demand for domestic employees. The advertising shows that there is enough preference for industrial occupations to draw employees away from domestic occupations in the early stages of an increase of business activity. The coincidence of seasonal peaks in domestic advertising with vacation and holiday periods could well give a hint to those who complain that the problem of household assistance grows "more perplexing every year." To be sure, the curve is more irregular than any other in the study, but the irregularity is associated with times of well-known changes in family arrangements. Part of the irregularity must consequently be attributed to changes in the habits of the domestic employers. The interesting change in the trend of the demand for clerical and sales employees makes one regret that the two groups were not separately tabulated. There has been a persistent effort in recent years to divert young people from clerical employments—with what success no one can say. On the other hand, the increase in the demand for clerical employees by financial organizations was very pronounced in the past year. It is impossible to say whether the amazing steadiness of the clerical and sales curve, in the period when other curves were going downward, was due to the demand for clerks or for salesmen, but it is evident that new factors are influencing the opportunities in these occupations.

In summary, it may be said that the proportion of advertising for women, about one-third of the total lineage, is higher in Philadelphia and probably in other areas, than the ratio of women among the gainfully-employed; that in busy periods, when total advertising increases, the advertising for women overtops the peaks in the men's curve. Part of this increased demand is accounted for by household employment, but some of it indicates that in boom periods it is relatively easy for women to find other kinds of employment.

CHAPTER V

THE USE OF DISPLAY ITEMS IN HELP-WANTED ADVERTISING

Throughout this study we are interested in the changes in help-wanted advertising space rather than in the number of items or the number of advertisements. However, this space is made up of display and non-display advertisements. For ease in discussion we shall refer to the non-display advertising as *regular*. The "number of lines of advertising" used as a statistical unit then becomes the number of regularly-printed lines which could be put in the space devoted to help-wanted advertisements.

There are two reasons for subdividing this advertising into regular and display items. The first is of interest to those who are using the advertising figures as an indicator of market activity; the second is of interest in explaining the volume of advertising. In the first place, in periods of active demand, both the volume of advertising and the method change. The display items show by all odds greater extremes than the regular items. Consider in Chart VII the difference in the index numbers of regular and display lines in 1923. In the peak of advertising for employees, when that of the regular items was 161, the index of display items reached 255. A similar divergence is apparent again in September. In the next year display items were as negligible as they were prominent in the year before. In this period there was little use of display advertising and the index dropped far below normal. The same tendency, though less marked, was evident in 1927. In 1928 there was an increase in display items relatively disproportionate to the increase in the total figures, but in general, in the past

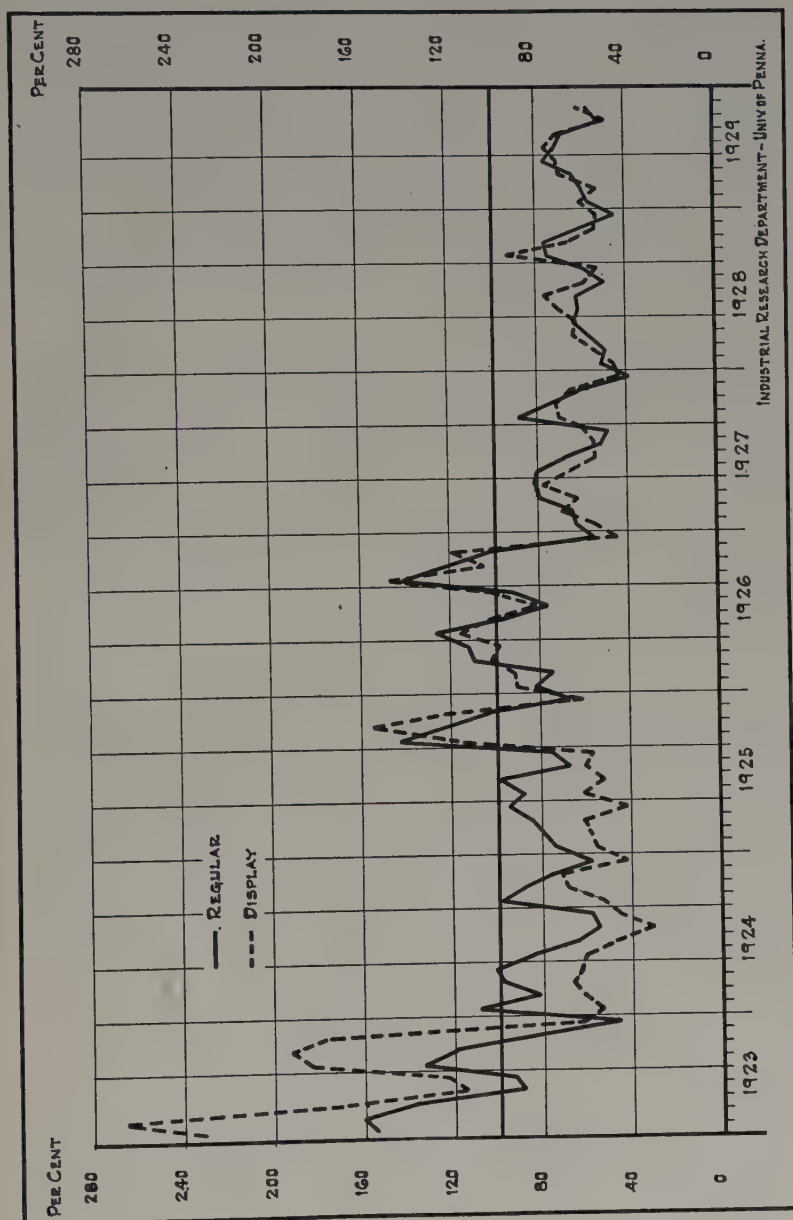


CHART VII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING CLASSIFIED BY TYPE OF ADVERTISEMENT—PHILADELPHIA (BASE-AVERAGE OF 1926).

two years, the two have crossed and recrossed each other, making little headway in either direction.

In every period of increased activity in the years studied, the display advertising tends to mount higher than the regular curve, though it attains its peak about a month later. The display curve, then, is more elastic than the total curve; a gap between the two with the regular curve above the display curve indicates an "easy" labor market; a gap between the curves with the display curve above signifies that employment is easier to find.

It is this change in the form of advertising which makes one doubt the wisdom of using the number of advertisements instead of the number of lines as a unit of measurement. The same number of advertisements involves more space in active periods than in inactive. Consequently the altitude of the peaks in a curve based on the number of advertisements will be less in a busy period than the actual pressure to secure employees as indicated by space.

To illustrate this conclusion, the curve of advertising in the New York *World* based on the number of advertisements is shown on Chart VIII. The New York curve gives little indication of a 1923 peak, as there surely must have been from the evidence of other data.

The study of display advertising leads to two conclusions: first, that a gap between the curves of regular and display items gives a more certain indication of the market prospects than the total advertising, and second, that the number of advertisements is not as useful a unit of measurement as the number of lines or some other unit of space.

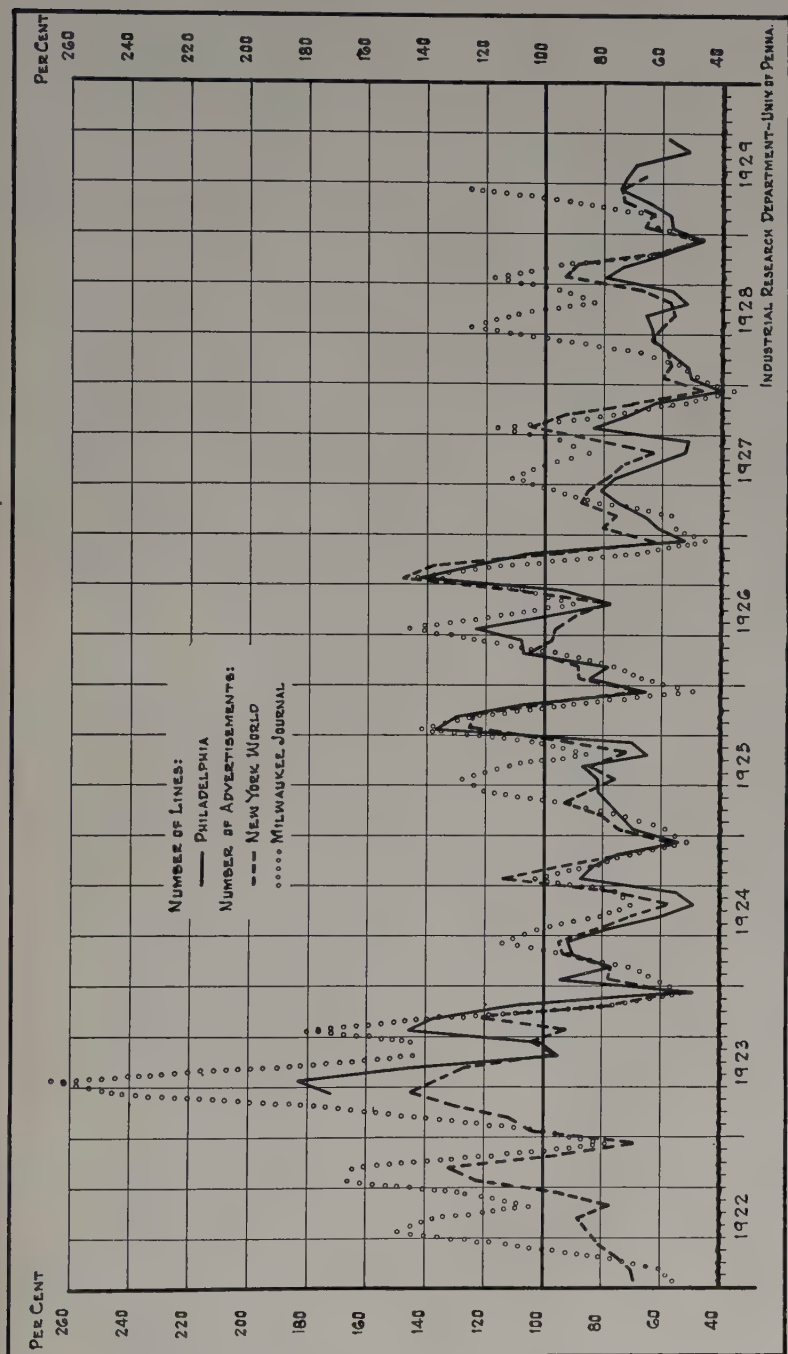


CHART VIII. INDICES OF HELP-WANTED ADVERTISING, NUMBER OF LINES—PHILADELPHIA, NUMBER OF ADVERTISEMENTS—NEW YORK AND MILWAUKEE—(BASE-AVERAGE OF 1926).

CHAPTER VI

THE ADVERTISING OF THE MAJOR INDUSTRIES IN PHILADELPHIA

We have shown that help-wanted advertising varies with commercial and industrial changes. Our next step is to attempt to trace the fluctuations away from the general movement in some of the major industries. Can the figures of advertising be related to the sources of demand? Concerns are not advertising *in general*, but for workers trained in specific occupations and it is upon this point of the availability of employees in the various occupations and industries that information is most limited.

To make an analysis by major industries and to isolate some of the occupations in these industries, it has been necessary to adopt the printed line as the unit of measurement and translate the space devoted to display advertising into terms of printed lines.

The classification of industries has presented more difficulty than the classification of occupations. In fact, the story of the first year of analysis was one of relegating industries, one after the other, to the "all others" group, leaving only six in the final list, namely: the automobile industry; metal manufacturing, ferrous; non-ferrous metal manufacturing, including brass, copper, silver, aluminum, etc.; building construction; hosiery and knit goods, and other textile manufactures.¹

¹ Though printing and publishing and many other important industries, such as clothing manufacture, would seem to deserve separate classification, it was not possible to maintain a consistent grouping. The clothing industry could not be distinguished from tailoring repair shops and some cleaning establishments. The printing and publishing group often advertised for press hands and other workers difficult to separate because of lack of definite terminology.

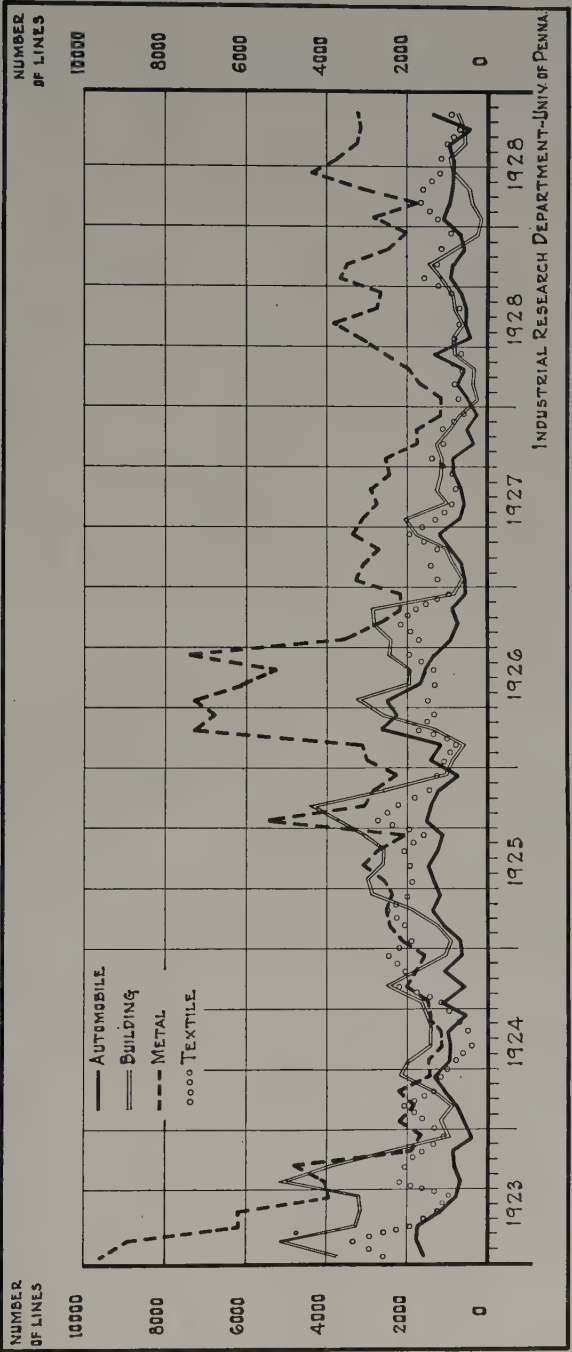


CHART IX. NUMBER OF LINES, WEEKLY, OF HELP-WANTED ADVERTISING BY AUTOMOBILE, BUILDING, METAL, AND TEXTILE INDUSTRIES.

INDUSTRIAL RESEARCH DEPARTMENT-UNIV. OF PENNA.

For purposes of general discussion, it is convenient to combine ferrous and non-ferrous metals and also textile and knit goods so as to form four industrial groups—automobile, building, metal, and textile.

The fluctuation in the number of lines of advertising is shown on Chart IX in absolute figures. The monthly figure used here is the average weekly number of lines for each industry.

Quantitatively the automobile advertising is normally less than that of the other three industries studied. Textiles are next lowest, and metal manufacture normally highest. This means that the want advertising is not proportionate to the number of employees in the industries. In 1921, according to the report of the Department of Internal Affairs on the productive industries of Pennsylvania, 34.5 per cent of all employees engaged in manufacture in Philadelphia were employed in textiles and textile products, 6.9 per cent in building and 19.2 per cent in metal-working (in the last figure the automobile industry is included). Though these ratios are computed in terms of manufacturing industries only and not in terms of the working population, it is evident that there are more employees dependent upon textile than upon metal-working plants. On the other hand, in the advertising of 1926, the base year used in this study, textiles used an average of 1456 lines or 3 per cent of the total advertising lineage; building used 1977 or 4 per cent; and metals, including automobiles, 6203 lines per week or 13 per cent of the total. During the whole period of this study, textile plants show a small ratio of advertising and in the past two years their demand has been practically negligible considering the numbers dependent upon this industry. At most, not more than 40 help-wanted lines out of every thousand in the Philadelphia papers in 1923 were supplied by textile concerns. In 1924 and 1925 there was an increase in the proportion due to textiles—an increase, however, which has not since been maintained. Such advertising as

was evident came mostly from the hosiery and knit-goods plants.

Other differences in seasonality and in periods of activity in these industries are left for consideration in the following chapters.

CHAPTER VII

ADVERTISING BY THE BUILDING INDUSTRY

So far as possible, the advertising for employees in all construction and building work, including bridge work, has been isolated from other advertising. Six of the skilled building occupations—bricklayer, carpenter, electrician, painter, plasterer, and plumber—were studied to discover the way in which occupational groups are disturbed by up and down swings in employment.

The existence of a spring peak in the demand for labor in building is known to everyone and needs no comment. There is, however, a peculiarity in the building demand not so generally recognized. Each year, in September and October, there is normally more advertising for employees than was placed in the early spring months. In the spring of 1923, our building help-wanted index was at 253; in October it was 259. A similar situation is evident in other years.

In 1924 the difference between the month of maximum advertising in the spring and that of autumn was greater. The October figure was 122.4 in contrast with the April figure of 107.4. The same situation existed in 1925 when the October index reached 220.0, though the May peak had been no higher than 149.5. A change occurred in 1926. The spring peak shown in May of that year was 162.3. There was a gradual falling off through the summer months and then an increase to an index of 143.0 in November, but this increase, contrary to the experience of the earlier years, did not bring the fall advertising above the level of the spring demand.

The autumn demand for building employees deserves some attention since the highest advertising does not corre-

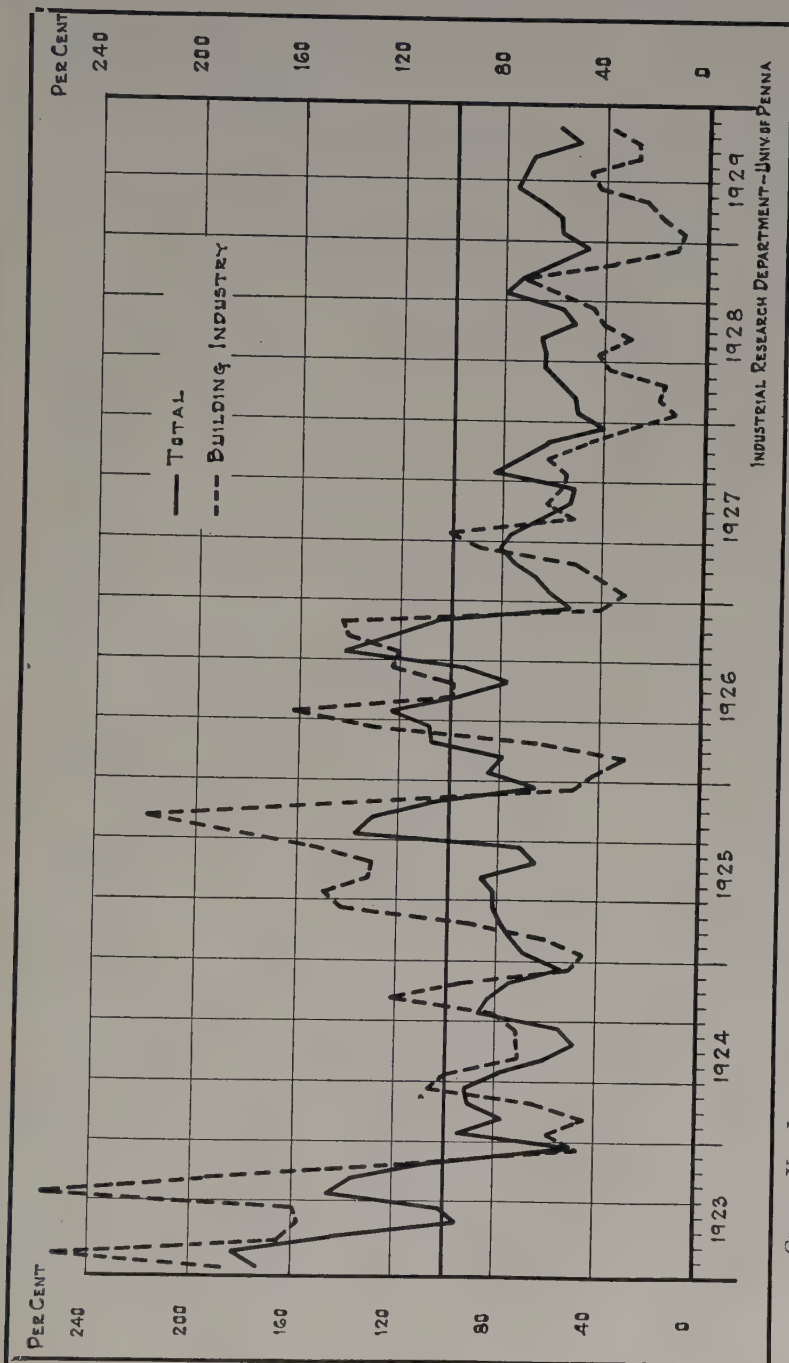


CHART X. INDICES OF LINES OF HELP-WANTED ADVERTISING BY THE BUILDING INDUSTRY AND ALL INDUSTRIES—PHILADELPHIA (BASE-AVERAGE OF 1926).

spond with the time when most employees are being recruited in the industry. It comes each year when construction jobs are being completed and when employees are more or less energetic in seeking opportunities for work that will carry them through the winter inactivity. At a time, then, when the least new work is being undertaken, contractors are compelled to advertise to obtain employees for the finishing up of contracts and for the replacement of others who, early in the season, have sought more permanent work.

This contradictory tendency could probably be found in many seasonal industries. It does indicate that caution should be used in assuming that the period of greatest advertising corresponds in all cases with the period of greatest employment.

Since 1923 the building curve might be considered as showing two phases. From 1923 to the end of 1926, the index of building advertising was normally above the total advertising of the market, showing the high volume of construction work in those years. Since 1927, building demand has tended to drop more and more below the total until in June 1929 the index was less than half the total.

In the building industry the demand for skilled employees follows closely the total for the industry. The combined curve for the six skilled occupations is shown on Chart XI. This may mean that at present there is a surplus of building employees. What would happen if there were a shortage of plasterers or bricklayers, one cannot say. There is a hint in the autumn peak of 1923 of a scarcity of labor in the skilled occupations. For the rest of the period, there is nothing whatever to be gained by separating the demand for skilled building workers from the total building advertising. The close correspondence of the two curves shows that the workers of the industry must be recruited in a fairly balanced way for all the occupations involved. The refinement of separating such occupations as bricklayer, carpenter, electrician, painter, plasterer, and plumber from the total adds very little to the information available from the total

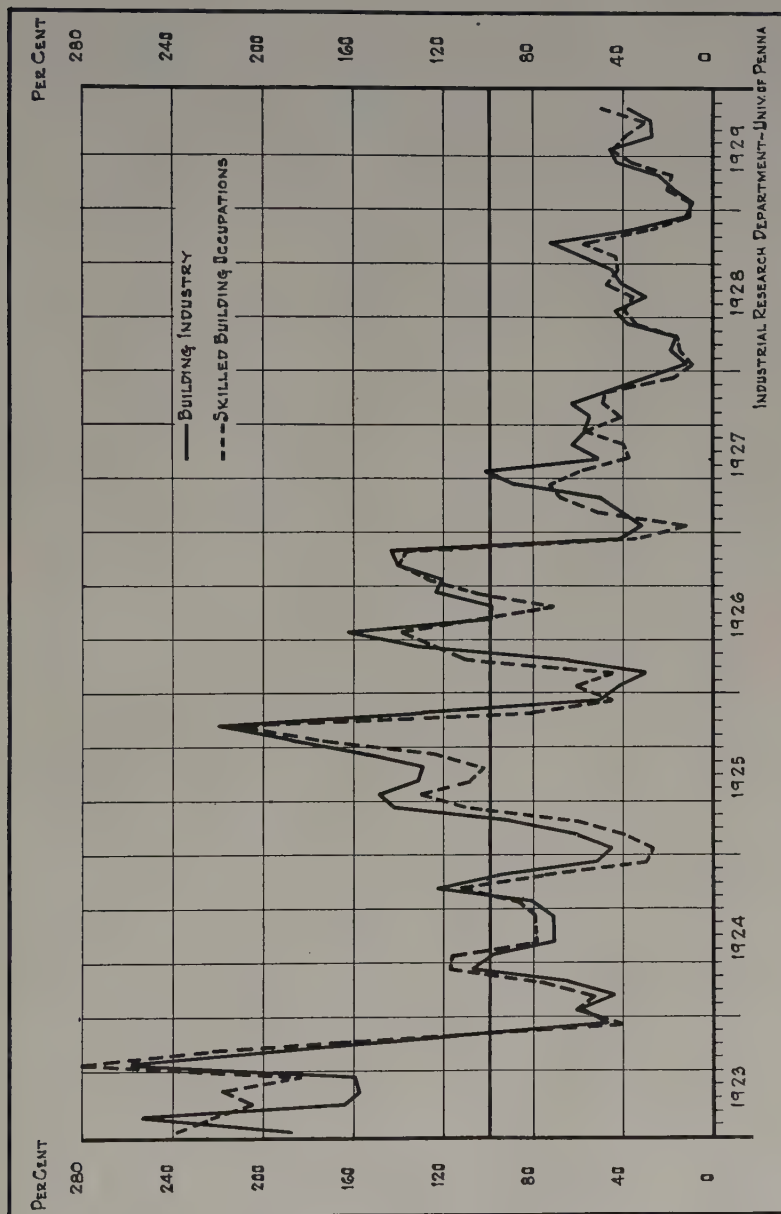


CHART XI. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE BUILDING INDUSTRY AND FOR SKILLED BUILDING OCCUPATIONS—PHILADELPHIA (BASE-AVERAGE OF 1926).

curve of the industry and certainly adds nothing that would warrant the cost of tabulating the data. The new finding developed by this study is that, though employment is greatest in the spring months, the time of most advertising for employees is normally toward the end of the building season, that is to say, in September or October.

CHAPTER VIII

ADVERTISING IN THE AUTOMOBILE AND METAL-MANUFACTURING INDUSTRIES IN PHILADELPHIA

Undoubtedly there is a considerable shifting of employees among the automobile, metal, and building industries. There is no clear line of demarcation to aid in separating the advertising of the various industries. The same name may be given to an occupation though the work connoted by the name differs. Again, many industries use identical occupations. The metal industry, the building industry, public utilities, and department stores may all be advertising for electricians. In case of doubt, it has been necessary to put the occupation in the industry in which training would normally be secured. No claim is made that minute accuracy has been secured in grouping by industries. An occupation is normally fairly definite, but many occupations are found in a considerable number of industries.

The attempt to isolate skilled occupations peculiar to the automobile industry was not successful. Consequently the demand of automobile concerns is referred to later with other metal manufactures. In the metal industry six occupations were taken to represent the skilled crafts—blacksmith, machinist, molder, patternmaker, sheet-metal worker, toolmaker, and welder. Two of these are machine-shop occupations and two, foundry crafts; the others represent forging, and sheet-metal and structural-iron work. The so-called semi-skilled occupations are represented by machine operatives.

Before considering these occupations, let us turn to the general curves of automobile and metal advertising. Both automobile and metal advertising tend to be high in the spring months. For automotive plants in this area, this is

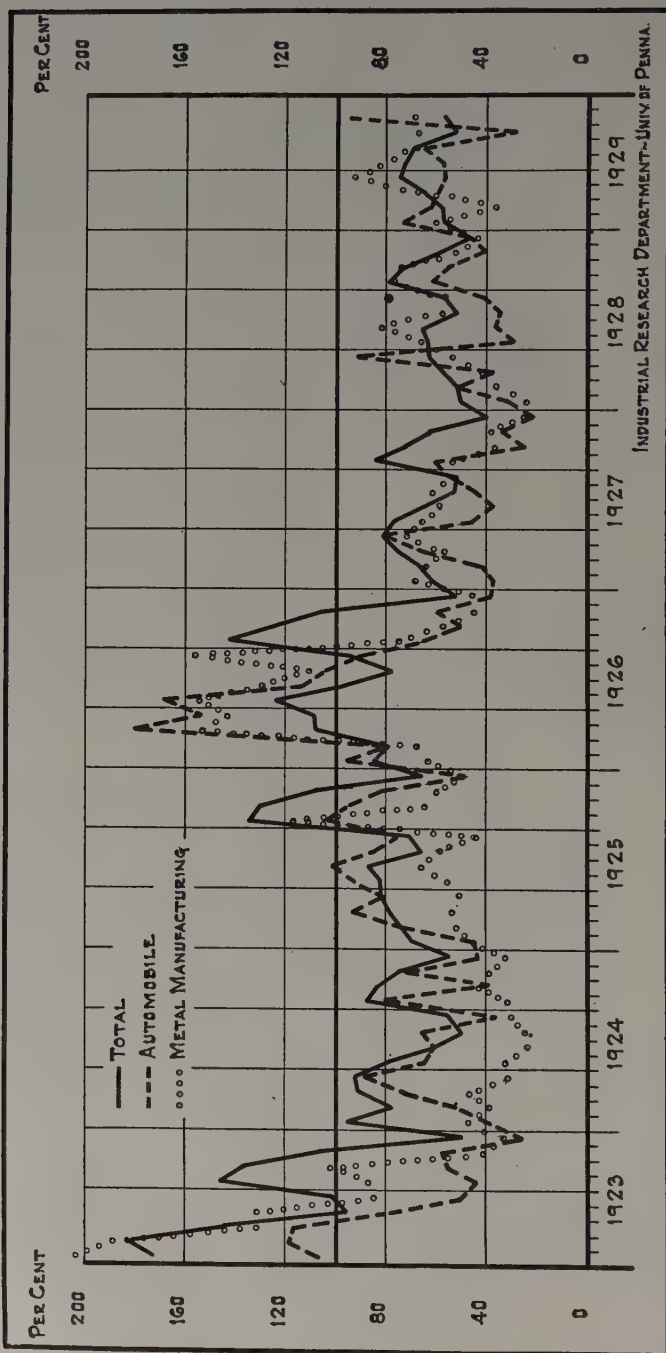


CHART XII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE AUTOMOBILE, METAL-MANUFACTURING AND ALL INDUSTRIES—PHILADELPHIA (BASE-AVERAGE OF 1926).

normally the high point of the year and their activity tends to scale down gradually until December; for the metal plants, on the other hand, there is usually a well-sustained period of demand in the autumn months. Want advertising by automobile manufacturers, then, does not follow completely the same form of curve as that of other metal-working establishments. The automobile advertising was moderate in 1923 when that of all other industries, and especially metals, was extremely high. Though the total advertising of the market has never since been as high as in 1923, the expansion of the automobile industry, shown in the regular demand of 1925, carried the index of automotive advertising in 1926 to a figure 42 per cent above its level in 1923. In 1926 this advertising began a month earlier than normal. Usually the high point of each year is reached not earlier than April and sometimes as late as May. In 1928 the April advertising was higher than that of the same month in the previous year, but the period of activity lasted a much shorter time. By contrast with a relative of 91 in April, the figure for May was down to 29.

Should the automobile advertising of the present year be considered unusual? Decidedly, yes. What is unusual is the maintenance of a steady level at a moderate height for six months. When it is recalled that 1926 was a record year, the present level, though 36 per cent below the average of 1926, must be considered as relatively high because the May and June index numbers are well above the same months in the two previous years.

HELP-WANTED ADVERTISING BY THE METAL-MANUFACTURING INDUSTRIES

In April 1923, when our record begins, the metal industry had an advertising index of 203. The steady decline of the rest of the year was relieved only by a short spurt of advertising in October. Not until September 1925 was there again any marked demand for employees in metal-working plants. The story of 1923 was repeated on a more

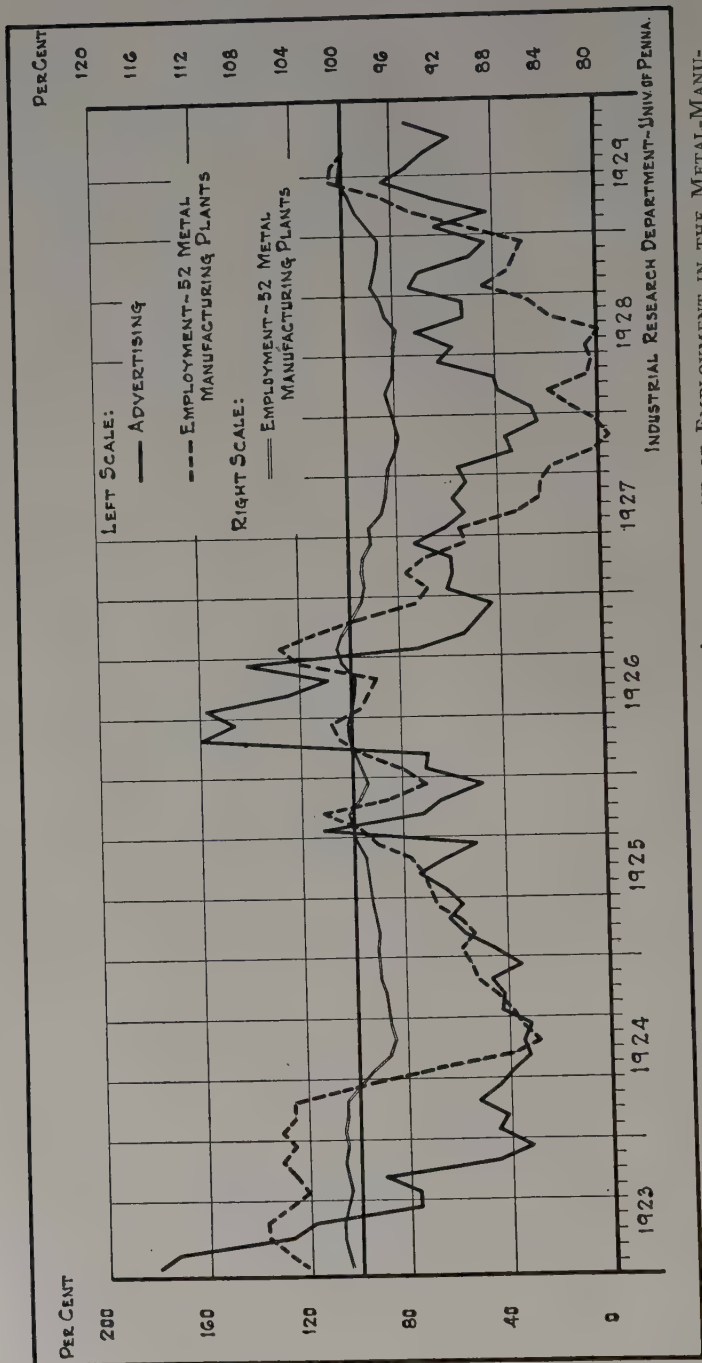


CHART XIII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING AND OF EMPLOYMENT IN THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE MANUFACTURE—PHILADELPHIA (BASE-AVERAGE OF 1926).

moderate scale in the spring of 1926, when the indices of March and May were 153 and 154 respectively. Since August 1926 there has been a lull in advertising and no period of very urgent bidding for employees. Metal-working advertising has increased somewhat in the present year, but the statement would give a misleading impression if it were not remembered that the upward tendency of the index has been very gradual throughout 1928 and 1929. The tendency is definitely upward, but it is upward because of the very low point to which the index had been carried by the end of 1927.

By contrast with the low level of advertising in building, the metal and automobile plants in 1929 show improvement in opportunities for employment. This statement is borne out by a comparison of metal advertising with the metal employment curve. The broken line on Chart XIII shows the employment curve brought into relationship with advertising by changing the scale.

The numbers employed in metal plants have increased steadily since the middle of 1928, with a phenomenally rapid rise in employment in 1929. The sensitiveness of the advertising curve in periods of reduction of payrolls is very evident. In the recessions of 1923 and 1926 the decrease in employment was more gradual than in advertising. The peaks in advertising correspond with peaks in employment. The difference is in the amplitude of change rather than in the direction and time of change. The tendency in the improvement which occurred in the metal industry in 1928 was for advertising to exceed employment relatively. The help-wanted advertising was then above the level of 1925, though the number employed had only reached the average of 1924.

In the spring of 1929 the employment index rose more rapidly than advertising until it is now as high as the average of 1926 and not far below the peak of employment in that year. The lower level of advertising is in part accounted for by the lack of activity in construction work and in part by the use of other methods of recruiting. That

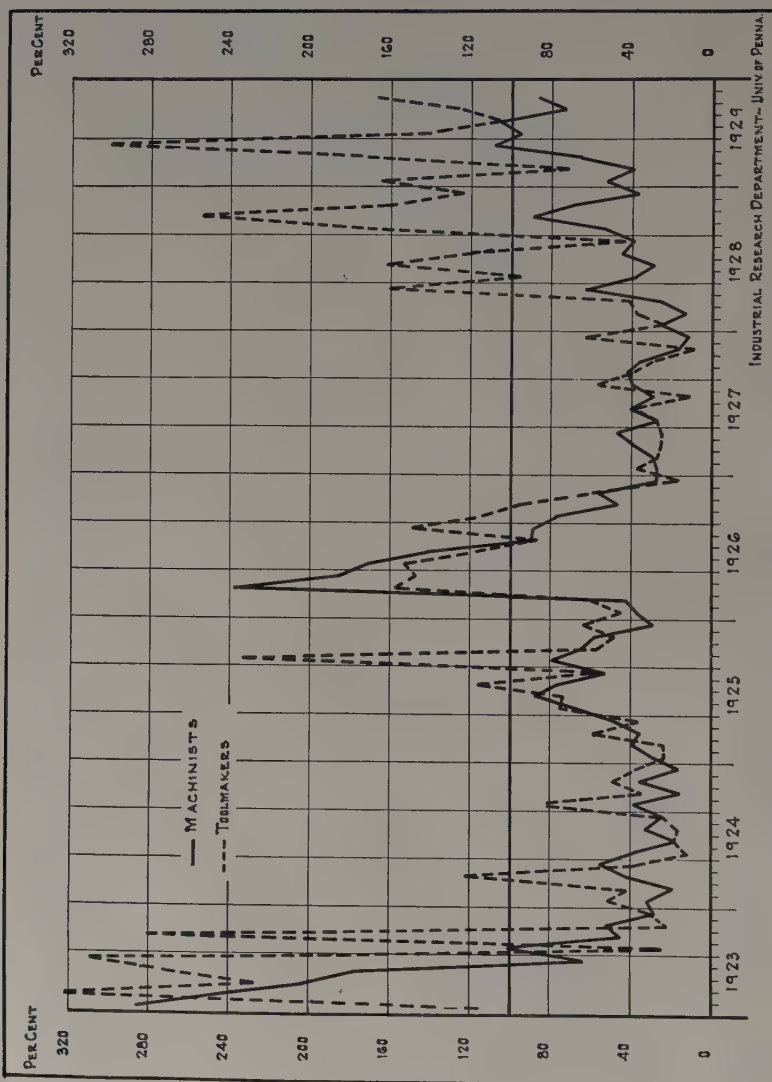


CHART XIV. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR TOOLMAKERS AND MACHINISTS—PHILADELPHIA (BASE-AVERAGE OF 1926).

there has been an acute shortage in some of the skilled metal occupations is indicated by the advertising for toolmakers and machinists.

Could anyone, following the advertising, have failed to foresee the present lack of trained toolmakers? For two years the demand for toolmakers has kept advertising for

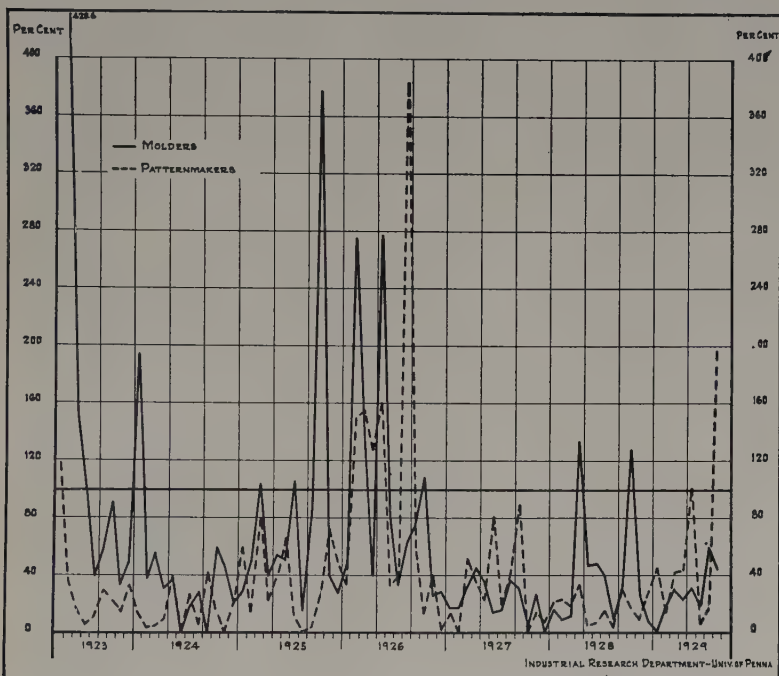


CHART XV. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR MOLDERS AND PATTERNMAKERS—PHILADELPHIA (BASE-AVERAGE OF 1926).

this occupation above the level of that for other metal occupations. Through 1928 the index figure rose from 160 in April to 255 in October. In 1929 it went still higher. The index of over 300 in April is in line with the levels of 1923. There is, however, an important difference in the fact that in 1923 the demand of all metal occupations was high whereas in 1929 there is a shortage of all-round trained machinists and toolmakers.

The advertising for machinists and toolmakers has been used to represent the machine-shop group; the advertising of the foundry branch of the industry for skilled workers is represented by molders and patternmakers on Chart XV, and of the forging and structural-iron work branch by blacksmiths, sheet-metal workers, and welders (Chart XVI).

Is there any predictable order in the way in which demand affects these skilled occupations? The toolmakers' curve (Chart XIV), normally very low, is subject to extreme peaks in active periods. The demand for toolmakers precedes that for machinists. In fact, the contour of the machinists' curve follows more closely the patternmakers' than the toolmakers' advertising. It may be said, however, that there is no predictable conformity in the curves of machinists, toolmakers, patternmakers, and molders. In a period of revival any one of the occupations may be subject to active recruiting, though normally more extreme peaks occur in the advertising for toolmakers and molders than for machinists and patternmakers. By contrast with the peaks of machine-shop and foundry occupations, the structural-iron and forging occupations move more gradually upward in periods of activity without any months of active recruiting. Even the 1928 curves for these latter occupations show little tendency, as a whole, to rapid increase. There is evidence of some shortage of welders in the advertising of 1929, but nothing as pronounced as is apparent in the demand for tool and diemakers.

To summarize the discussion of the relation of the demand in skilled occupations, combined curves have been made of the lineage of advertising for the six skilled occupations already discussed and for machine operatives. The combined curves with the index curve of total metal advertising, excluding automobile, are given on Chart XVII.

During most of the period the demand for skilled employees closely paralleled the total curve. The exception is furnished by the period from November 1926 to the present. During 1927, the demand for skilled employees was

slight and far below the total curve. This situation changed during the first half of 1928 only in the sharp peak of April. The activity of the last half of the year was evident in September, and by October the skilled curve was above the level of any month since midsummer 1926. In 1929 there were signs of a more intense demand which carried the skilled curve upward rapidly.

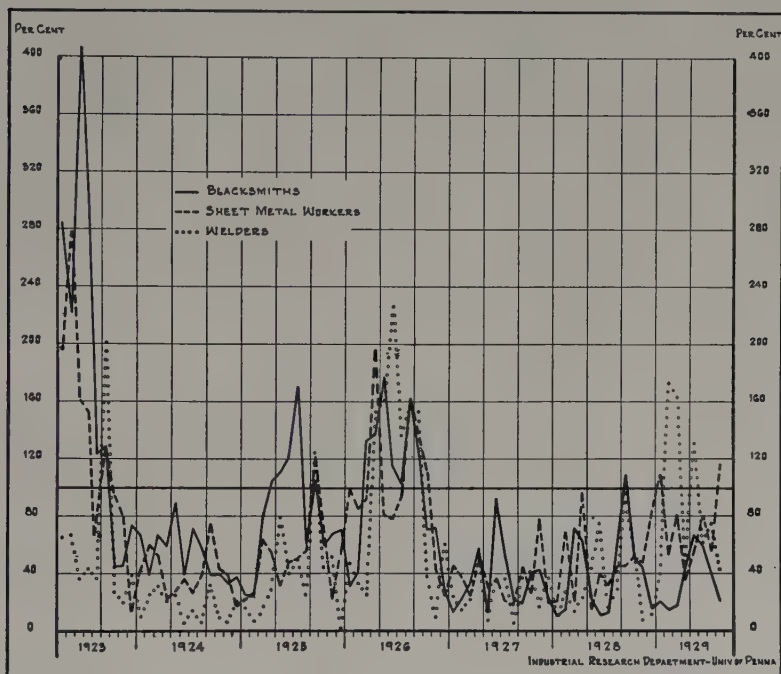


CHART XVI. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR BLACKSMITHS, SHEET-METAL WORKERS, AND WELDERS—PHILADELPHIA (BASE-AVERAGE OF 1926).

Machine operatives and specialized workers normally overtop the total curve, but in 1927 and 1928 they were less sought through advertising than other metal workers, though the decrease in 1927 was not nearly so great as that felt by the skilled trades. Throughout 1928 a complete shift is evident in the relative demand for skilled workers and machine operatives. Both the total curve and the

skilled curve were above the curve for machine operatives until the end of the year, but in the demand of 1929 the advertising for machine operators was more insistent than in any occupation except toolmaker.

A twelve months' moving average of these curves (Chart XVIII) shows more clearly the closeness with which the total curve and the skilled occupations were related from 1923 to 1926 in contrast with the decline in the demand for the same crafts in 1927 and the first half of 1928. The dotted curve on Chart XVIII shows a tense demand for machine-tool operators and specialized workers during the activity of 1925 and 1926. At the peak of activity occupational demand was more nearly in balance. The recruiting of skilled workers, however, decreased more quickly and farther than that of semi-skilled.

In the metal industry the total advertising curve is not as useful in indicating the gaps in the supply of labor as the total curve of building is for the construction industry. On the other hand, the study of occupations is far more significant. The specialization in the industry and the wide variety of manufactured products represented by the same occupations mean that some branches of manufacture start activity readily. The highly-skilled craftsmen peculiar to this industry are retained through a period of depression and the building up of payrolls normally starts with a demand for machine-tool operators, the more specialized workers, months before the skilled groups are affected. As activity becomes general, there is a period of very intense recruiting of toolmakers, all-round machinists, etc. Such a situation in the spring of 1926 carried the skilled curve relatively far above the total, balancing somewhat the lag in earlier months; a similar situation in 1929, less warranted by the total employment, created an extreme demand in a few skilled occupations.

What use can be made of the knowledge of fluctuations in the metal-working occupations? The salient fact in the study of these fluctuations is the retardation in the demand

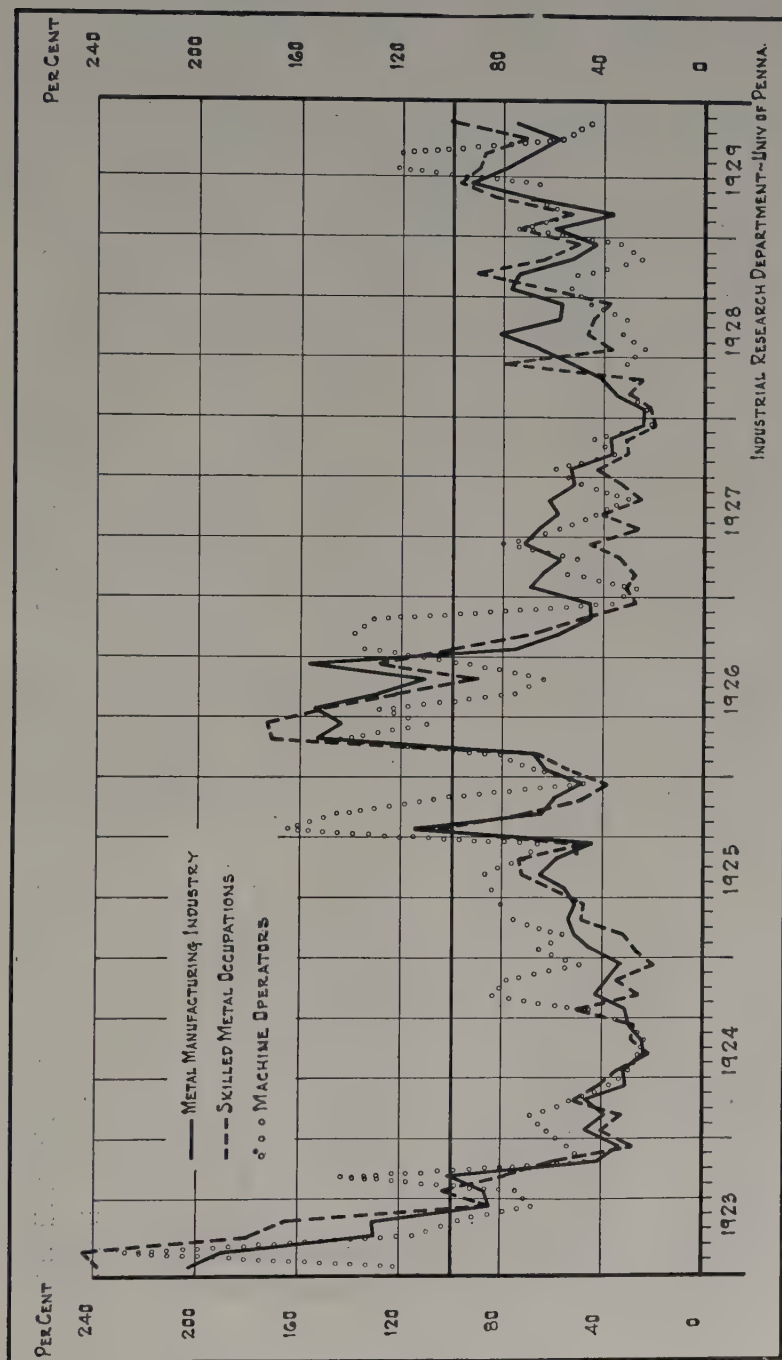


CHART XVII. INDICES OF NUMBER OF HELP-WANTED ADVERTISING BY THE METAL-MANUFACTURING INDUSTRY AND FOR SIX SKILLED METAL OCCUPATIONS AND MACHINE OPERATORS—PHILADELPHIA (BASE-AVERAGE OF 1926).

for one major group or another. For the industry, therefore, the demand of any one month may be misleading. An impression of extreme shortage in an occupation may result from the fact that the demand has just reached the stage of interest in that particular work and the most pressing need will pass in a short time. The peak of a single month means nothing in the determination of labor policy unless it is considered in relation to a somewhat extended time. More would be gained by a study of the curve corrected for seasonality, or even from a moving average curve, than is gained from attention to the erratic monthly variation.

Consider for a moment the significance of the situation in the metal industry shown by the advertising in 1929. The period was one of moderate activity, but was by no means characterized by an extreme wave of expansion. The upswing was gradual. The demand for toolmakers, on the other hand, was extremely high; that for machine operatives was comparable to the demand in a boom period. Had the demand been primarily for the all-round crafts, a logical solution would have been to upgrade from the machine-tool occupations. This in fact was the solution. But the advertising shows that the procedure soon developed also an apparent shortage of machine operators. Had expansion been less gradual, how would occupational adjustments have been made?

The case illustrates the difficulty of maintaining adequately-balanced training, a difficulty enhanced by the fact that metal plants must anticipate not only their own demand but a changing demand in other industries.

In the industrial structure, metal manufacturing is one of the industries in which lack of balance between skilled and unskilled employees is of serious consequence. This is true because metal plants must serve as a training ground for many occupations in other industries. Department stores cannot train their own electricians. Many public utilities plants do not have the facilities for training their own machinists or repairmen. Many workmen in the building in-

dustry are drawn from metal-manufacturing plants where they have undergone their primary training.

METAL ADVERTISING COMPARED WITH THE INDICES OF ENTRANCES AND TURNOVER IN FIFTY-FIVE METAL-WORKING PLANTS

It is of interest to discover to what extent the advertising of the metal industry is related to the index of employees hired by a group of metal plants. For this comparison there is available the number of entrances in 55 important plants.

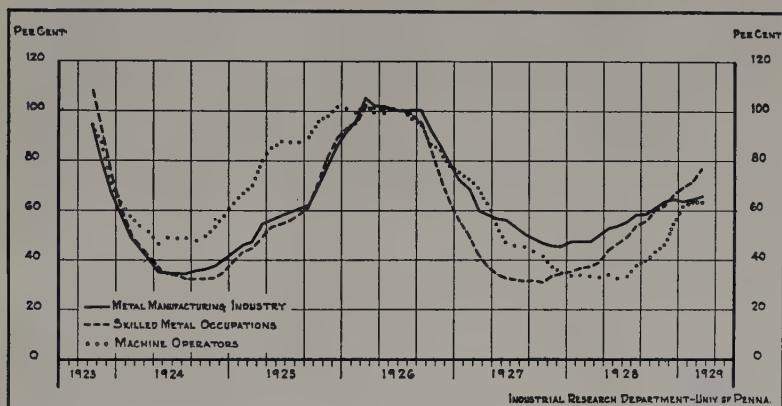


CHART XVIII. MOVING AVERAGE OF INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE METAL-MANUFACTURING INDUSTRY AND FOR SIX SKILLED METAL OCCUPATIONS AND MACHINE OPERATORS—PHILADELPHIA (BASE-AVERAGE OF 1926).

This chart furnishes one of the most closely-related curves in our whole series of comparisons.

At the end of the boom period of 1923, advertising decreased one month before entrances showed any tendency downward. In 1924 the number of entrances increased with only a slight additional amount of advertising. No such statement can be made for the period of building up payrolls in the autumn of 1925. The October hirings were preceded by a month of increased volume of advertising. In the beginning of 1926 it looked as though an increase in payrolls was to be made without an excessive amount of

advertising and the entrances increased faster than the advertising, but all that was gained by this retardation of advertising was upset by the towering peaks of March to May—peaks that were repeated in August. The only contradictory movement in the six-year period occurs at the end of 1927 when hirings in the various plants took place without resort to advertising. In 1928 there was an upward tendency in entrances and the advertising moved up slowly from month to month until the May figure reached an index above that of the previous May. In May 1929 there was a similar peak in entrances. The contrary movement between entrances and advertising at the end of 1927 and during the early months of 1928 shows the ease of the labor market in this period. The curves moved upward together after March until July and down together from September. During the intervening months, the movements were in opposite directions with the advertising curve the first to swing down.

A wholly different consideration is introduced when an attempt is made to compare the fluctuations in advertising with indices of labor turnover. The advertising is both a means of informing unemployed workers of the existence of vacancies and of giving employed workers a knowledge of opportunities at "other plants." Consequently it is not surprising that labor turnover rates and especially resignation rates vary with entrance and advertising rates. Students of labor turnover agree in stressing the fact that "normal labor turnover is not a fixed quantity"; that turnover rates oscillate with changes in productive activity. In this connection Mr. Berridge says:

" . . . But as the volume of employment increases, the surplus available for hiring dwindles and the labor market becomes a 'sellers' market.' Almost anyone except the unemployable can find some sort of job, and the man who already holds a job can find around the corner plenty of others offering to him real or imaginary advantages. Hence, arises a rapid and violent increase in the quit rate in a period of high or rising rates of production. Intimately associated with this tightening of the labor market as a cause for increased quit rates, is the fact that

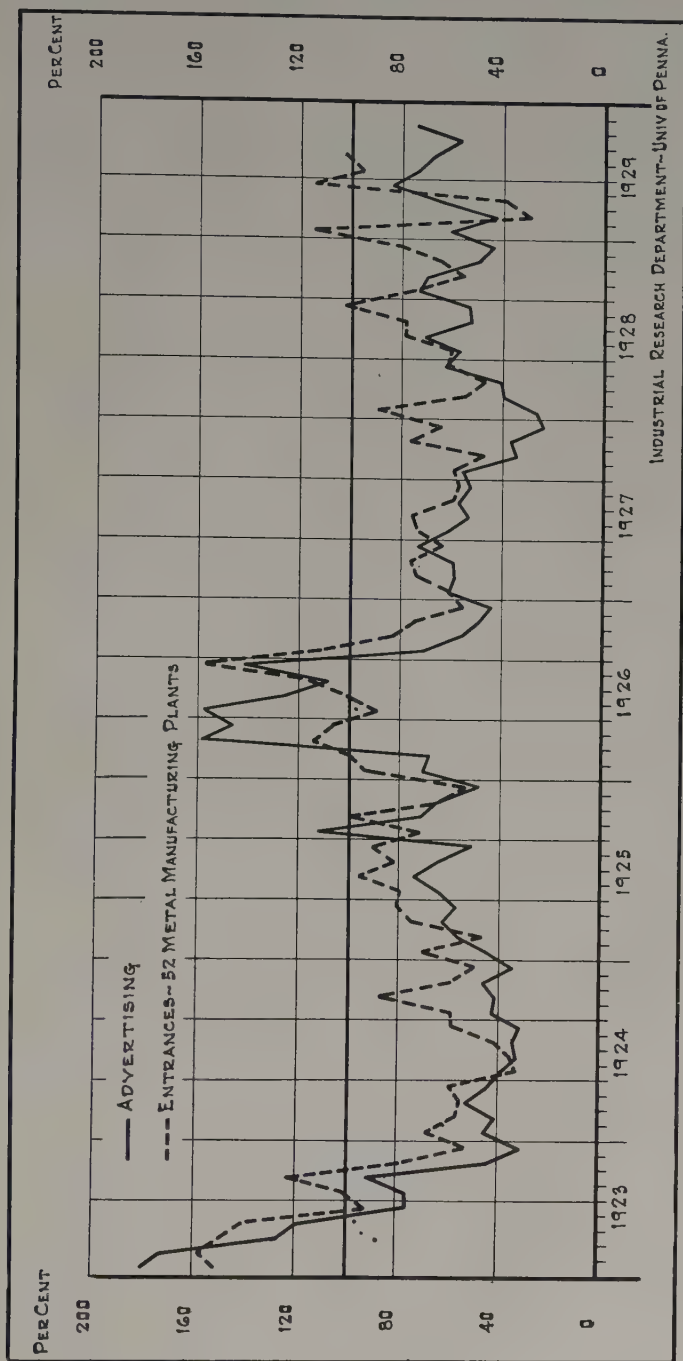


CHART XIX. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY AND ENTRANCES INTO THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE MANUFACTURE—PHILADELPHIA (BASE-AVERAGE OF 1926).

heavy accessions naturally load the force with short service employees, among whom the quit rate is well known to be higher than among employees of longer standing.”¹

It would be quite possible to argue that the curve of advertising should not be expected to follow the turnover curve if the index were based on the total turnover including lay-offs, since lay-offs tend to be high in an inactive period when advertising would be expected to be less important.

There are a few cases where this reasoning can be accepted to explain the divergence between the advertising and the turnover curve, but on the whole the movement of the two curves is enough alike to warrant the use of the total where a more refined turnover curve is not available. Actually the two curves follow each other very closely. This correspondence is reasonable since the labor turnover curve has been found at all times to follow closely the curve of business activity and since business activity cannot help having its influence upon advertising. In upward swings, advertising anticipates and overtakes the turnover peaks. Again, in the down-swings, advertising may be said to anticipate, since it decreases several months earlier than the turnover curve falls. The seasonal drops found in December of every year in the advertising curve are not so evident in the turnover curve, which tends to be low in all the winter months.

Considering the three curves of entrances, turnover, and advertising by metal plants (all include automobile as well as other metal manufacturing), it is evident, from the moving average curve, that in a downward swing advertising drops precipitously, entrances follow, and turnover lags behind the others, continuing downward after the other two curves have turned the corner upward. This is evident in 1923 and 1924 and again at the end of 1926. In this downward swing advertising is the most sensitive and its move-

¹ Metropolitan Life Insurance Co., Policyholders Service Bureau, *How High Should Labor Turnover Be?* p. 7.

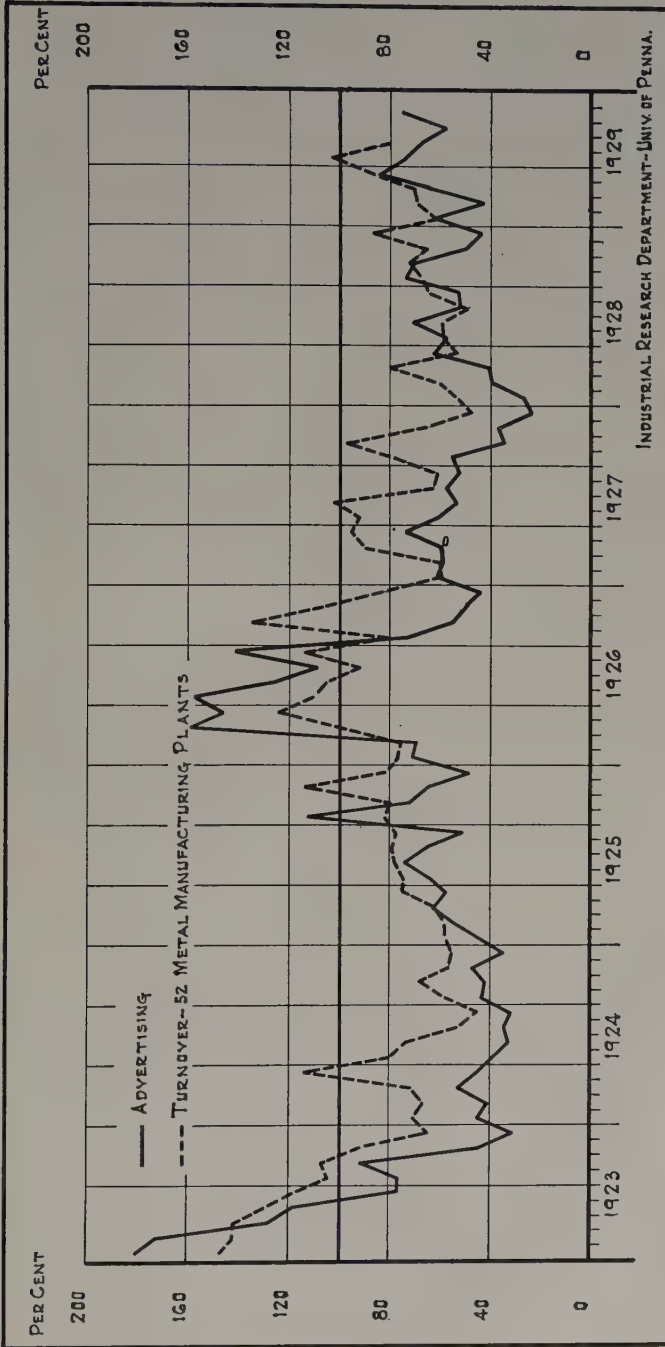


CHART XX. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY AND TURNOVER IN THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE MANUFACTURE—PHILADELPHIA (BASE-AVERAGE OF 1926).

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ment most unmistakable. In the early stages of expansion, while the labor market is easy, entrances proceed more rapidly than advertising. When activity is well under way, the increase in the advertising index outstrips the increase in both entrances and turnover, rising above both the other curves in the peak of activity. The turnover curve is less sensitive than either of the other curves, continuing downward for several months after the other two curves are definitely headed upward. Assuming the same relationship as prevailed in the past swings, the advertising curve can be

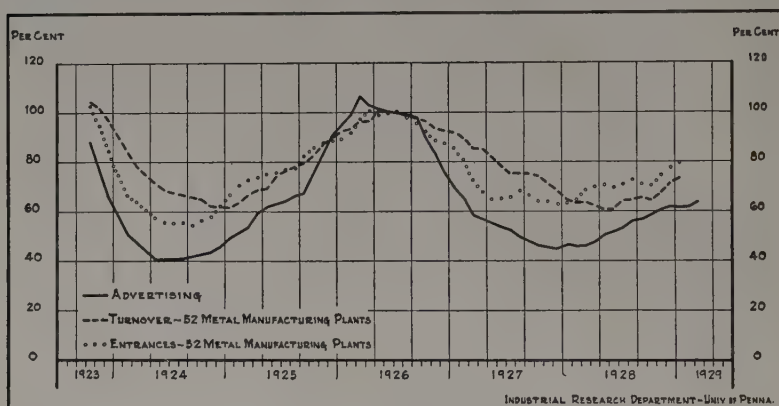


CHART XXI. MOVING AVERAGE OF INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY AND OF ENTRANCES AND TURNOVER IN THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE MANUFACTURE—PHILADELPHIA (BASE-AVERAGE OF 1926).

counted upon to turn upward ahead of other indicators of use in personnel departments.

Comparisons in the metal industry have been made in some detail because data are not yet available for a comparison of the advertising of other major industries with entrances and turnover. The curves for the metal industry give a reasonably complete picture of changes in labor market conditions for employees dependent upon employment in these plants. They show further the way in which individual plants can keep in touch with the employment situation in their industry.

The advertising data should be an aid to executives in planning the future needs of the industry; they indicate more clearly than other personnel data the time when it will be difficult to obtain new employees, when starting rates should be adjusted and special attention given to both placement and training. The turnover data give a clue to the necessity of upgrading and adjustment within the organization.

CHAPTER IX

ADVERTISING IN THE TEXTILE INDUSTRIES IN PHILADELPHIA

The textile advertising curve bears little resemblance to the curves of the other three industries already considered. It was relatively high in the last part of 1924 when other industries were depressed and their volume of advertising low. Not only does the textile industry differ in the time of its activity but the periods of its own advertising peaks vary from year to year. In 1924 they occurred in October and December, in 1925 in March and September, and in 1926 in August and October. By 1927 there was a complete shift and the evidence of activity was greater in the first part of the year, notably February and April. The shift in time of activity from year to year can be explained by the diversity of manufacture represented by the textile curve. At one time the spinning branch of the industry may be most active and weaving may exert little influence; at another, the demand may be on the clothmaking side and weavers are more sought for than spinners; or again, the textile plants proper may be making little demand and the advertising may be placed by the hosiery and knit-goods establishments.

Though Philadelphia is a textile center, the ratio of advertising to the numbers in the industry indicates a considerable surplus of workers dependent upon the textile trades.

After two years of depression, some improvement in textile employment began to be evident in the fall of 1928. Activity has been moderately well sustained in 1929. In fact, the spring months show more demand for employees than has occurred in any year since 1925. A comparison

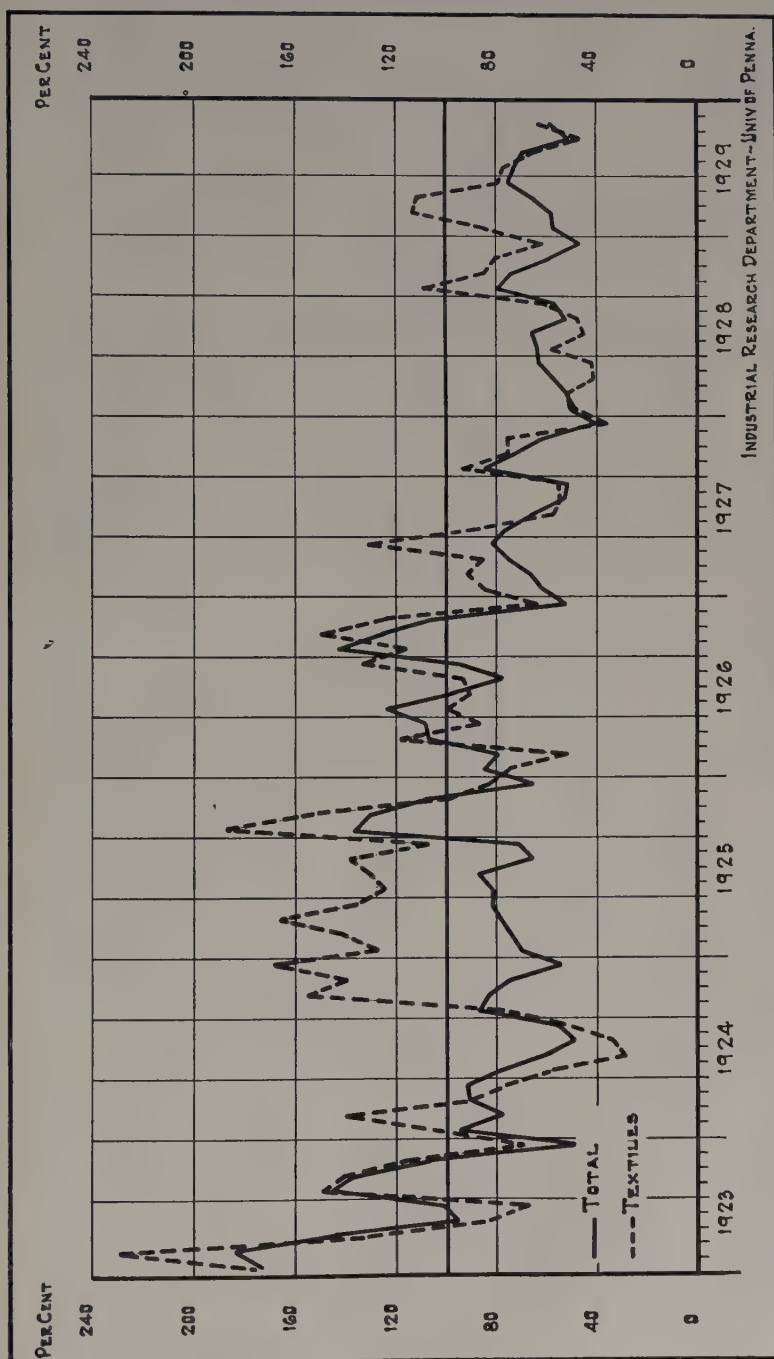


CHART XXII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE TEXTILE INDUSTRY AND ALL INDUSTRIES—PHILADELPHIA (BASE-AVERAGE OF 1926).

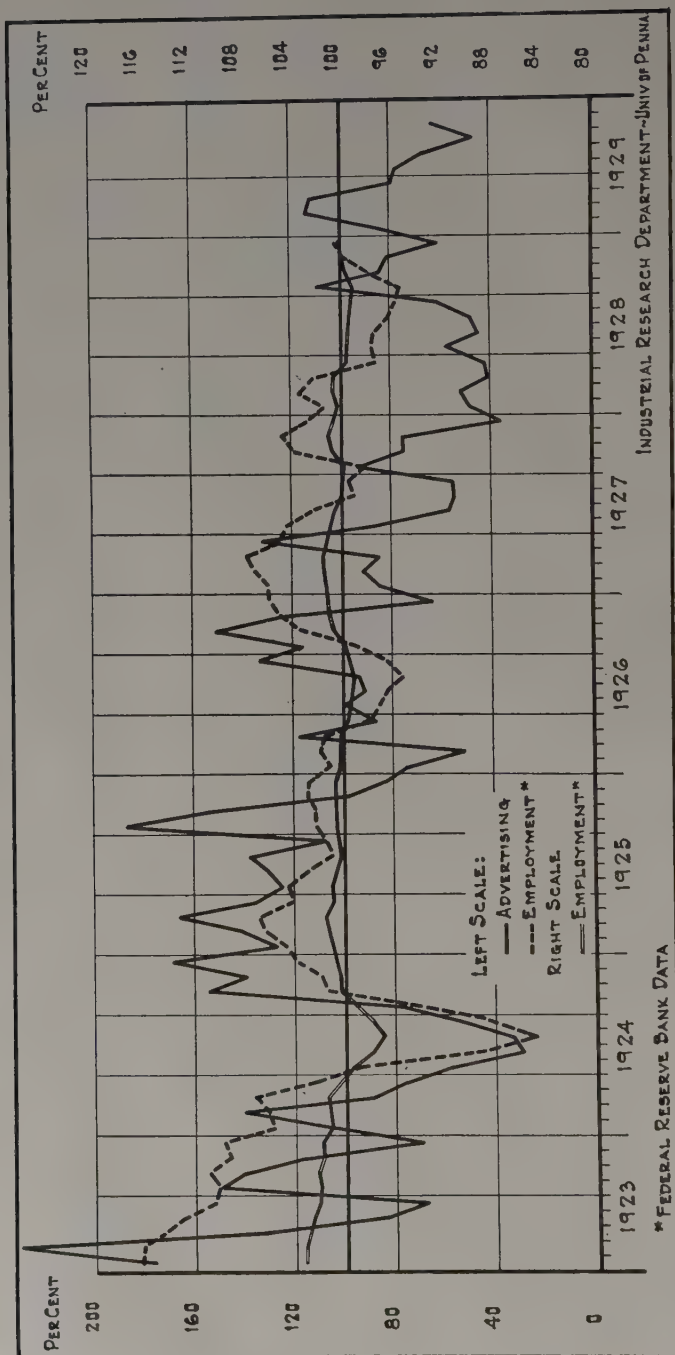


CHART XXIII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY AND OF EMPLOYMENT IN THE TEXTILE INDUSTRY—PHILADELPHIA (BASE-AVERAGE OF 1926).

of textile advertising with textile employment in Philadelphia is shown on Chart XXIII. The employment curve is for the number on the payroll in textile firms reporting to the Federal Reserve Bank.

The trend of employment in the textile industry has been almost continuously downward since 1923, and definitely downward from March 1925 to the end of 1928. Each year there is a slight improvement in the late autumn and winter months. This seasonal demand results in peaks of advertising. At other times the advertising has been negligible. In the past three years the supply of workers available for hiring was too large to cause any problem of recruiting. This situation, however, should not lead one to overlook the close conformity of the employment and advertising curves in the years 1923 to 1925, nor to overlook the improvement indicated by the present relatively high level of advertising.

Chart XXIV shows the relation of the combined textile curve to that for hosiery and knit goods. It is evident that the total textile curve gives a very irregular picture, in part because it represents the activity of different branches of the industry; it is evident also that a considerable amount of the advertising of 1925 was due to activity in the hosiery and knit-goods trade.

The advertising for weavers and coners and winders has been tabulated separately. In Chart XXV the advertising for weavers is compared with the textile curve (after hosiery and knit goods have been eliminated). The total amount of advertising for weavers was so low that a slight increase produced a wide oscillation in the curve. In periods of increasing production the demand for weavers seems to be out of all proportion to the increase in the total. In low periods the demand for weavers is even less, relatively, than that for other workers. After a peak of advertising for weavers in the spring of 1928, the weavers' curve did not approach closely to the total until October, a divergence which can be explained by the fact that the demand of the

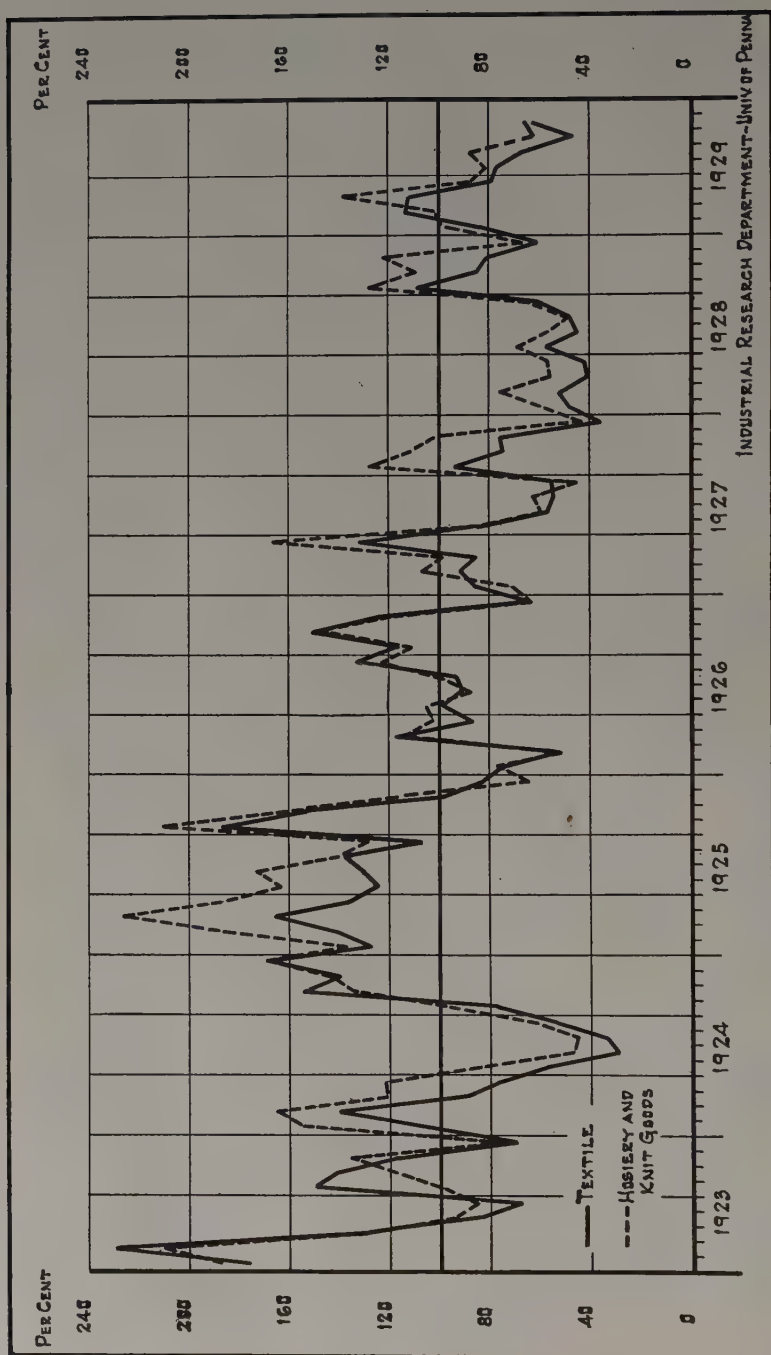


CHART XXIV. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE TEXTILE INDUSTRY AND BY THE HOSEY AND KNIT-GOODS INDUSTRY—PHILADELPHIA (BASE-AVERAGE OF 1926).

spring was for spinning and winding and the advertising for weavers at that time was of little significance.

For the hosiery industry, two occupational groups were considered as representative of skilled employees—the group of knitters includes both footers and leggers and in the full-fashioned branch of the industry these occupations

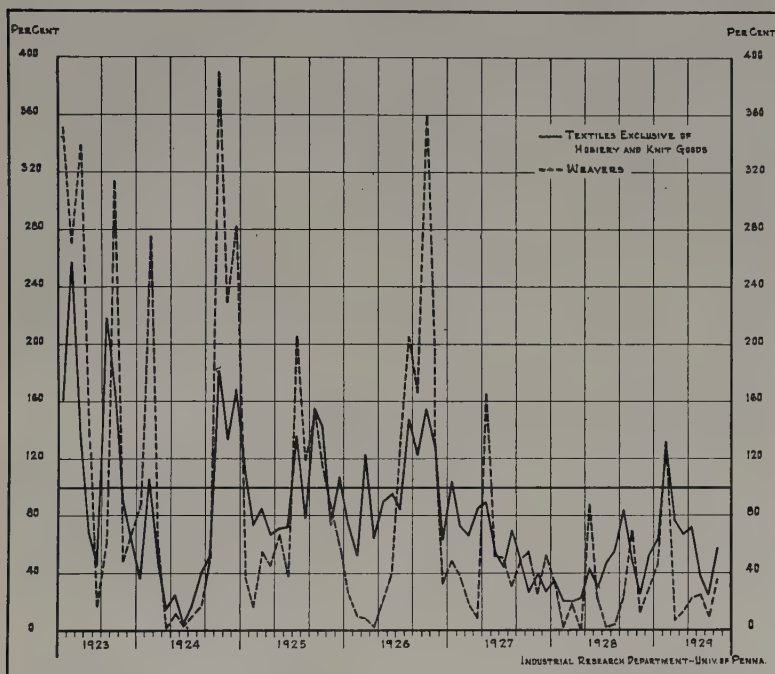


CHART XXV. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE TEXTILE INDUSTRY, EXCLUSIVE OF HOSE AND KNIT GOODS, AND FOR WEAVERS—PHILADELPHIA (BASE-AVERAGE OF 1926).

serve to separate men from women since full-fashioned knitters are almost exclusively men. On the other hand, loopers and toppers in both seamless and full-fashioned hosiery plants are women and constitute the most skilled women's occupations in the industry. There are, to be sure, other skilled occupations, such as boarding, which have not been separated from the total curve, but the main point of the comparison is to find whether there is a difference

between the total curve and the largest skilled occupational groups.

Chart XXVI gives some of the most interesting information of the whole study. In the peaks of activity in 1923 and 1925 the advertising for loopers and toppers outstripped

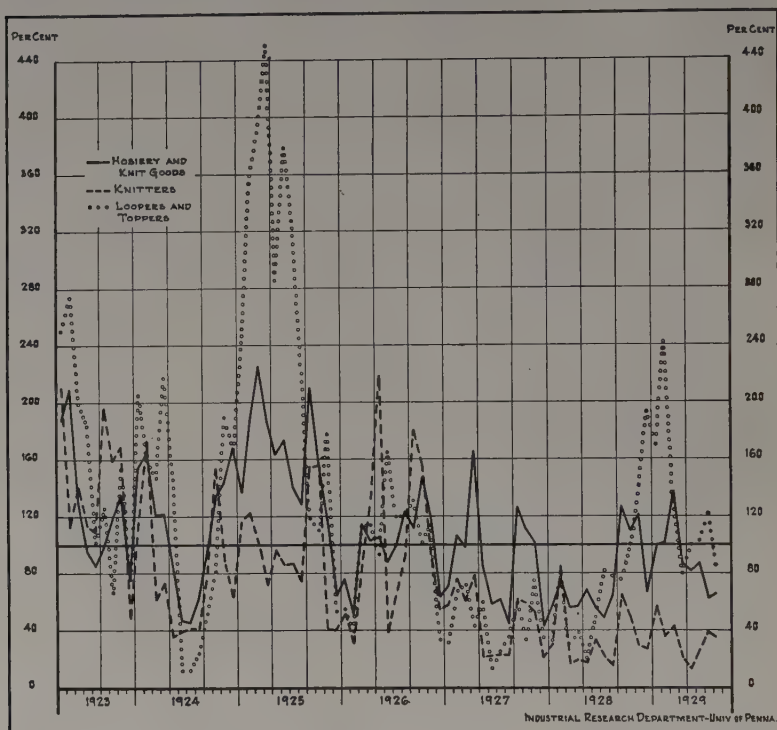


CHART XXVI. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE HOSIERY AND KNIT-GOODS INDUSTRY AND FOR KNITTERS AND FOR LOOPERS AND TOPPERS—PHILADELPHIA (BASE-AVERAGE OF 1926).

that for knitters. In fact, in 1925 the index for loopers and toppers was as high as 450.9 in April. The corresponding index for knitters was 71.6. These are the periods in which the total women's curve was exceeding the men's. These occupational indices were still going up a month after the total hosiery curve reached its maximum. Both the knitters' and the loopers and toppers' curves dropped below the total curve in 1927 and 1928, showing that in

the moderate demand of the last two years the manufacturers have been able to recruit skilled employees from their own lists and used advertising only at special times to balance their needs for machine operators, repairers, and other miscellaneous workers in the hosiery industry. Note, however, the change in the occupational demand in the last months of 1928 and in 1929. The demand for knitters continued to be low, but the industry felt a shortage of loopers and toppers which carried the advertising index to 242, the most urgent demand since 1925.

The present peak for loopers and toppers does not indicate a comparable increase in employment in the industry. It points to a lack of balance in training and planning in the industry. The same conclusion is warranted by a study of the relation of employment to advertising. Here a slight increase in employment is normally accompanied by a very considerable increase in the volume of advertising.

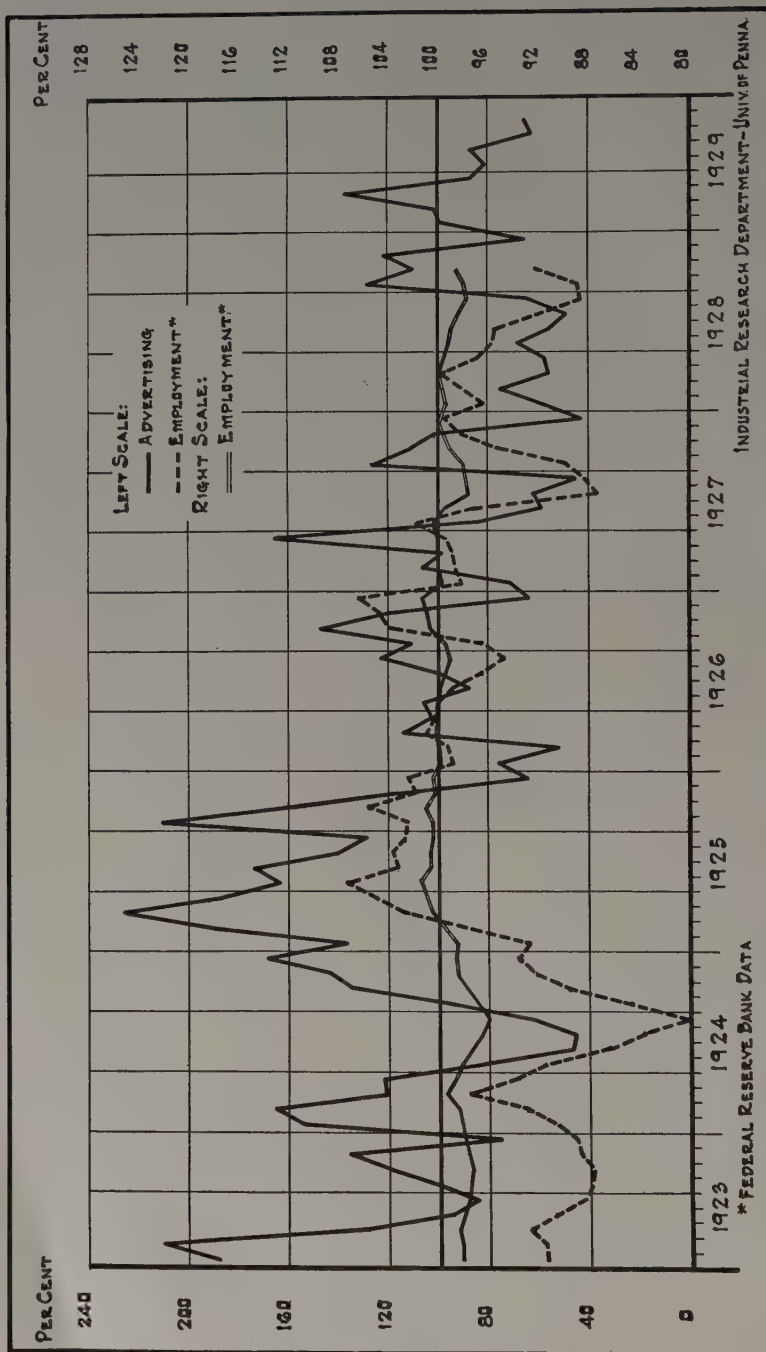


CHART XXVII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY AND OF EMPLOYMENT IN THE HOSIERY AND KNIT-GOODS INDUSTRY—PHILADELPHIA (BASE-AVERAGE OF 1926).

CHAPTER X

ADVERTISING FOR COMMON LABOR

Some occupations it has not been possible to allocate to industries. One of the most significant of these is common labor.¹ The advertising for unskilled labor has undergone a complete change in the years covered by this study. At the beginning of the period it was the calling most in demand; at present the demand is negligible—a statement which is more impressive if made quantitative. In 1923, 41 lines out of every thousand in the Philadelphia papers were advertisements for common labor, whereas in 1929 only 11 lines out of a thousand are being placed.

The curve for the whole period is on Chart XXVIII. The relation of this curve to the total advertising is consistent throughout the six-year period. In each period of expansion, such as occurred in the early months of 1923, in the autumn of 1925, and the spring months of 1926, the laborers' curve rises rapidly; in intermediate periods of recession or mild depression the laborers' curve falls off relatively more than does the total. This was true in 1924 when the laborers' curve remained below the total throughout the year. The area between the curves is still more striking in the past three years; since September 1926 there has not been a month in which there was any exceptional demand for common labor or even a demand commensurate with total advertising. The oscillation in this curve may

¹ Little doubt is felt about the classification of occupations assigned to the various industries. Only those with a fairly definite terminology have been attempted. The writer has more doubt concerning the occupation of laborers than of others. This is occasioned more by other studies made in the market than by the advertising study. Each year the tendency to specify work grows more evident. Automobile washer, lumber handler, stoker, trucker, and many occupations must be grouped if the occupation of laborers is to be defined in any consistent way.

be judged from the fact that in the extraordinary demand for employees in April 1923, the index for common labor rose to 426. In the same months in 1928 it was at 33.

The lack of spirited recruiting of common labor is of interest in connection with the recent discussions of unemployment in this area. The monthly relatives since Feb-

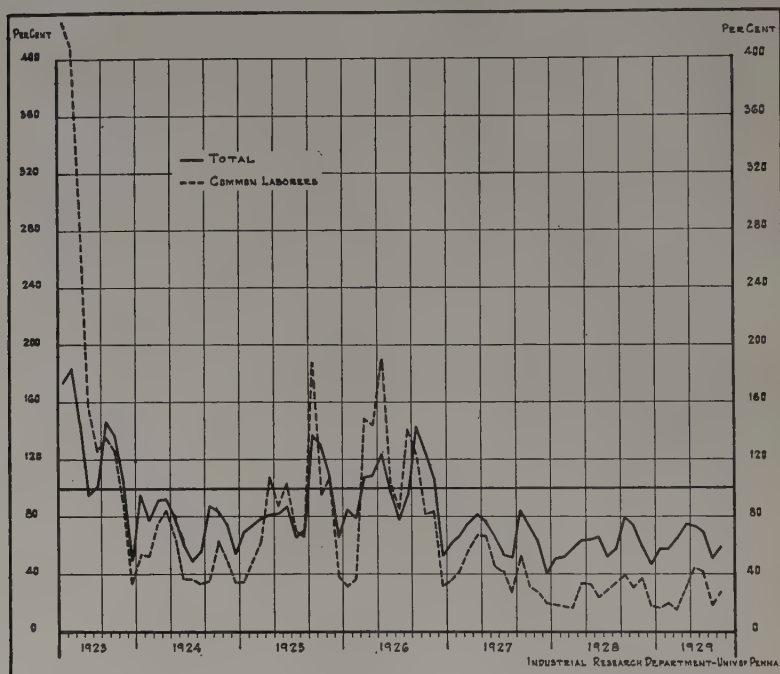


CHART XXVIII. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR COMMON LABOR AND FOR ALL OCCUPATIONS—PHILADELPHIA (BASE-AVERAGE OF 1926).

ruary 1928 have been lower even than in 1924. The lack of demand for unskilled employees in the first six months of 1928 is in harmony with the conclusion already reached of a similar decrease in the demand for machine operators on standard machine-tool equipment and specialized bench work. In the same period advertising for skilled craftsmen was relatively active. What is amazing is the fact that in the last six months the laborers' group has not shared in

the improvement in demand already evident in other occupations.

This chart deserves consideration. For three years there has not been any improvement in the demand of the less skilled callings. In part of this period general business was expanding and the demand for skilled employees difficult to fill.

Has the substitution of machine processes changed the character of the demand? Has the training program been inadequate? The disproportion between the advertising for laborers in 1923 and 1929 is almost incredible.

Our study shows that since the end of 1926 the advertising of the building industry has been very moderate. The lull in the building industry accounts for part of the lack of opportunity for laborers.

It does not account for all the slack in the market. If there is, as our curves indicate, a shortage in skilled occupations, if there is, at the same time, little opportunity in unskilled callings, the only answer is to be found in a well-considered plan for speeding up training in the Philadelphia area.

CHAPTER XI

HELP-WANTED ADVERTISING BY EMPLOYMENT BUREAUS AND A COMPARISON OF SITUATIONS- AND HELP-WANTED INDICES

ADVERTISING BY EMPLOYMENT BUREAUS

Though the primary function of employment bureaus is to find positions for applicants, there are times when they use advertising to find applicants for positions. This advertising of placement agencies has been separately classified, first, because much of it cannot be allocated to industries, and second, because it may be duplicated by the individual concerns in the want-advertising columns.

The study shows that the question of duplication is not very important since the employment agencies contribute only two per cent of the total advertising for the market, or too little to affect materially a general index. If the amount were not so small, the character of the curve would make it desirable to exclude this class of advertising from the totals.

The two salient characteristics of the advertising of employment bureaus are that the volume tends to be highest in periods of depression and that the trend has been upward since 1923. In both these respects the demand of the employment bureaus differs from the general demand in the market.

The disparity of the two curves in periods of depression is shown by the fact that in 1924 the advertising of employment bureaus was higher than it was during the active period of 1923. Again in 1927, a year when industrial payrolls were steadily being reduced, the index of advertis-

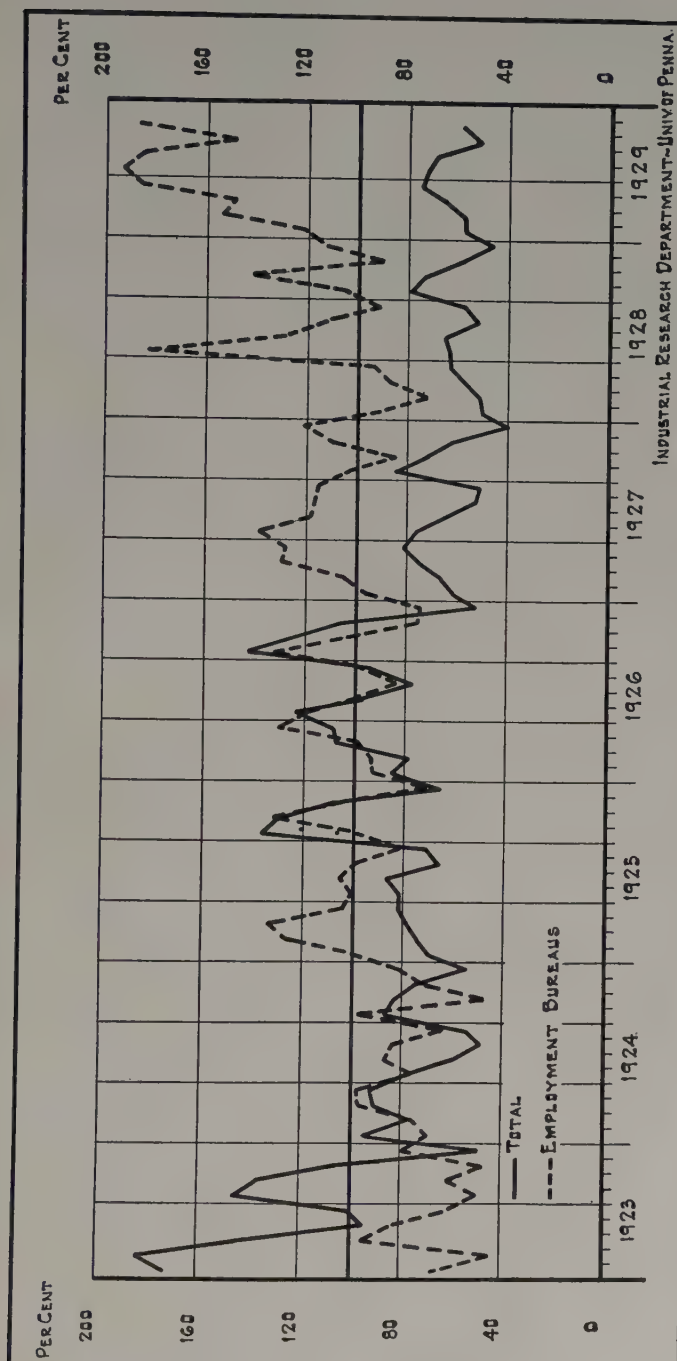


CHART XXIX. INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY EMPLOYMENT BUREAUS AND BY ALL AGENCIES—PHILADELPHIA (BASE-AVERAGE OF 1926).

ing by employment bureaus remained higher than it was in the last half of 1925 and in 1926, when business was especially active. That is to say, that the advertising of placement agencies tended to be highest when unemployment was highest.

The explanation of the advertising of placement agencies in times when business is dull is to be found in the fact that the positions offered are for skilled or very specialized employees, and that, in an easy labor market, firms frequently intensify or exaggerate the qualifications they desire both in training and experience.

The upward trend in the index of help-wanted lineage of employment bureaus is so marked that each year since 1923 has shown an increase over the previous year. Had the general advertising index shown an upward trend there would be a suggestion, at least, of expansion in the area; since it did not, the upward trend for employment bureaus must mean that these agencies are being more and more depended upon for applicants and are filling a wider need in the community than formerly.

This indication is interesting in itself, but since our concern is to get an index of the demand of labor it does not seem essential to continue the separation of advertising by employment bureaus. At all times the amount represents a small proportion of the total. While it is possible that, in active periods, concerns advertise for themselves and also call upon placement agencies, there does not seem to be enough duplication to deserve separate consideration. While there is some nonconformity with the curve of total advertising, an understanding of these variations can be gained from a direct study of the operations of employment offices. The relation between the number of applicants at employment offices and the number of positions offered by employers can be determined more precisely and be secured more easily than the help-wanted advertising.

A COMPARISON OF HELP-WANTED AND SITUATIONS-WANTED ADVERTISING FROM DATA OF THE NEW YORK *World*

The inverse side of the employment situation, as far as advertising is concerned, is shown by the advertisements for situations wanted. These indicate the extent to which workers are on their own account seeking employment. In dull times the volume of situations-wanted advertising will increase just as the volume of help-wanted items decreases. Consequently in the chart showing both indices according to data supplied by the New York *World*, the year 1924 was the one in recent years when the index of situations-wanted was at its highest level.

The totals from year to year show that advertising for situations wanted is now 35 per cent below the average of 1926 and 53 per cent below 1924. The severity of lack of employment in a dull period is indicated by the area between the curves of help-wanted and situations-wanted.

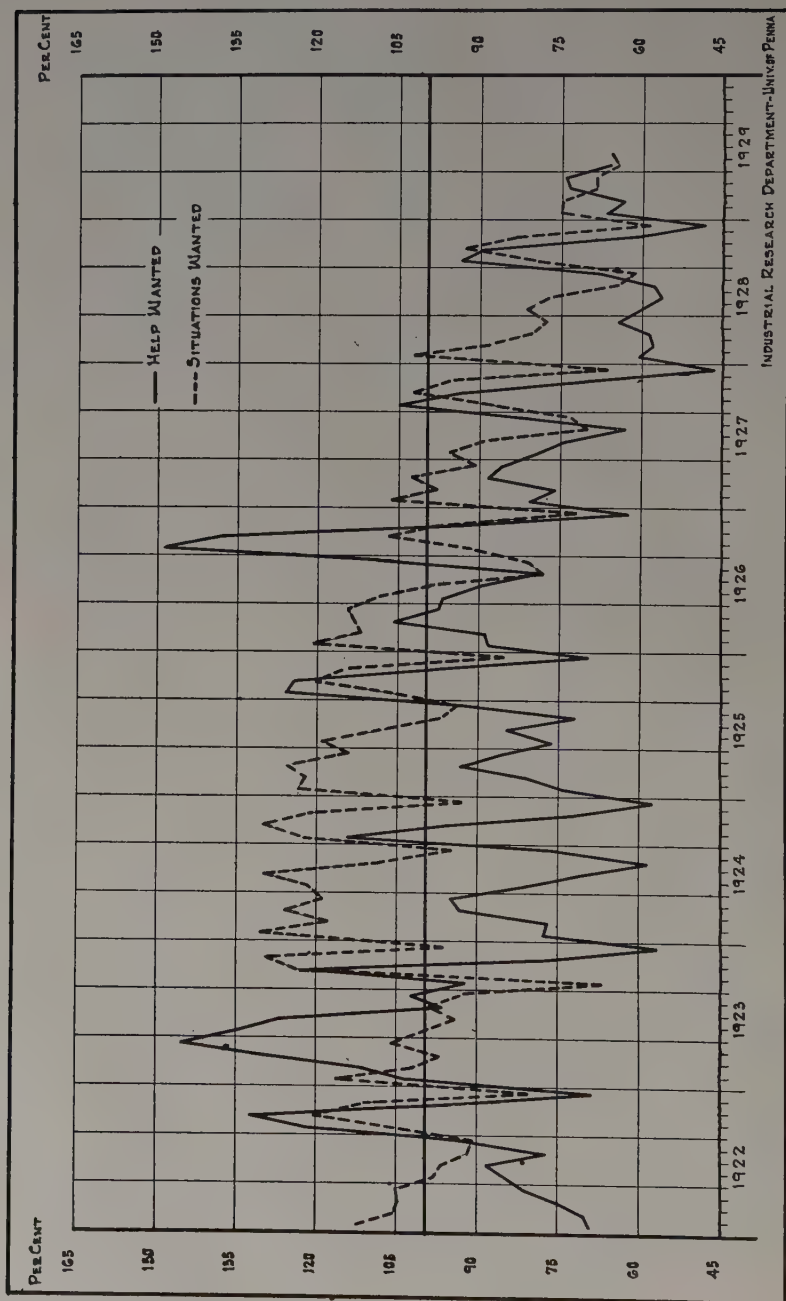


CHART XXX. INDICES OF NUMBER OF ADVERTISEMENTS FOR HELP WANTED AND FOR SITUATIONS WANTED—NEW YORK *World*
(BASE-AVERAGE OF 1926)

CHAPTER XII

MEASURING THE DEMAND FOR LABOR

This study has two objectives. The first is to add to the available data for appraising the demand for labor; the second, to explore some of the ways of using this additional information in connection with training.

Like many other problems in economic research, the demand for labor must be studied indirectly. In this discussion we have developed a measure which shows the relative intensity of demand at different times by centering attention upon only one of the evidences of demand—the help-wanted advertising.

If it were necessary to determine the absolute number of unfilled positions vacant at any one time, we should have to adopt some other procedure than a study of the want columns. The usefulness of the advertising index is that it shows fluctuations in the intensity of demand from one point of time to another. It is a measure of scarcity or “ease” in the labor market. In this respect the index of advertising should be regarded as a supplement to employment data, not as a substitute.

The difficulty of the statistician who attempts an exact quantitative analysis of demand is that neither employment data nor the number of unfilled positions is known for any locality in complete form. The number of workers on pay-rolls, while more definite than an index of advertising, cannot be ascertained for all establishments in a large community. Except in census years, it is difficult to get employment figures for small industrial establishments. No feasible method has been found to represent in any employment index the growing number of service industries connected with modern life, such as automobile service sta-

tions, garages and repair shops, in which large numbers of workers are being absorbed. Still less is it possible to record changes in domestic employment.

Though some progress has been made in securing data for seasonal industries, we are yet far from having an adequate measure of the fluctuations in the numbers engaged in building, in road construction, in bridge work and in other seasonal occupations. The wide gaps in the information available make it difficult to judge the conditions of the market from employment figures alone.

Employment data for a locality are, then, usually somewhat limited in scope and overweighted by large-scale enterprises. Besides, the record of the number employed is rarely reported by occupations.

To the extent to which figures of the number employed are continuously ascertained, the index of employment must be considered to give a more precise measure of the part of the labor demand which it covers than the advertising index does. It is also an indicator, and one of the most widely used indicators, of changes in the course of productive activity.

The limitations of the advertising data are of a different sort. A small space may represent a demand for one person or for several hundred persons. Again, a firm may advertise for one occupation and hire employees for others from among the applicants. Besides, there are many other methods of placing employees both through employer and employee agencies and through public and private agencies. There are cases of inter-plant transfer and also many employees who find their own employment by direct calls at plant offices. The number of lines of advertising cannot in any way give a quantitative figure of the number of employees needed.

Despite these limitations, our study indicates that the demand represented by advertising lineage must be fairly consistent. It has also the advantage of including the demand of small and large establishments for a wide variety of

employment, domestic and commercial as well as industrial. Further, it does record the particular occupations most in demand and in this respect gives a measure of the part of the demand of which there is scarcely a hint in other data.

The flexibility of the help-wanted index gives it a special significance in supplementing an employment index. The advertising deals only with the dynamic and currently changing demand whereas the index of employment is weighted at all times by a continuously-employed group. Advertising pictures only change in conditions; employment reflects the general course of productive activity.

Within a locality, the total advertising gives a summary figure which shows whether there are or are not opportunities for employment. Between localities it indicates the areas in which unusual expansion is occurring. A comparison of the advertising of various industrial centers would give an objective measure of opportunities for employment in various parts of the country. In specialized centers, even the total curve gives an indication of the opportunities in particular branches of industry as well as of the seasonal changes. To the extent to which the supply of labor available to any one locality can be attracted to another, a knowledge of the total advertising would be an aid in coping with problems of local unemployment.

We may now review the supplementary use of advertising data in connection with other personnel data. Let us consider, first, the way in which an individual plant becomes aware of a shortage in the labor market, in so far as this shortage affects its own business.

The individual plant has, or can have:

1. A record of the number employed.
2. A record of the number of separations from its payroll.
3. A record of the number of applicants for positions.
4. A record of the number of applicants who have refused to accept jobs either because of the work or the rate of pay.
5. A record of the number of applicants who appeared to accept the jobs but failed to report for work.

6. A record of the number hired.
7. An intangible, though valuable, impression from the type of applicants.

Whether these data are systematically tabulated or not, they form the basis for an impression useful in connection with personnel policy. If firms were equally affected at the same time by prosperity and depression, they would furnish a fair guide. But most of these indicators are variables, dependent upon what is happening in other plants in the same industry. To judge by the rate of labor turnover is to judge by a figure which is continually changing with business conditions. To judge by the number of applicants is to depend upon a figure which is affected not only by the reputation of the firm and the effort made to secure employees, but also by the rate of entrances at other plants. Consequently, to use its own records, a firm needs a summary of the experiences of others in the same industry.

Especially in periods of rapid change any general indicator which will anticipate the experience of an individual plant has a considerable value. The executive of an individual concern knows, by the increased difficulty of replacing his employees, that the market is mobile, but he knows it ordinarily in only one of two ways—either by increased turnover among his own employees, or by the failure of applicants to accept the jobs offered. The turnover test is available only after valued employees have been lost; the hiring test depends upon whether or not the concern is itself increasing its payroll. Without any increase in its own personnel, a plant may be losing its employees, through resignations, because of the activity at other plants.

The information furnished by personnel data for a group of plants is more significant than the experience of any one of the group. In Chapter VIII of this study charts were shown of employment, labor turnover, and accession rates in 52 metal plants from 1923 to date. These indices were compared with the advertising of all the metal plants in Philadelphia. We cannot, however, give the ratio of em-

ployment to turnover and advertising since our 55 plants are but a sample, though a large one, of Philadelphia's metal manufacturing, whereas the advertising is for all metal firms using the want columns.

By years the indices of personnel data follow the same direction, though they differ in level.

TABLE 3

INDICES OF CHANGES IN PERSONNEL DATA IN THE METAL-MANUFACTURING INDUSTRY IN PHILADELPHIA

| | Number Employed | Labor Turnover | Accessions | Advertising Linage |
|------------|--------------------|-------------------|------------|-----------------------|
| 1923* | 99.6 | 115.5 | 115.7 | 101.9 |
| 1924..... | 89.9 | 68.0 | 55.2 | 40.6 |
| 1925..... | 91.3 | 76.5 | 75.7 | 64.4 |
| 1926..... | 100.0 | 100.0 | 100.0 | 100.0 |
| 1927..... | 87.1 | 75.7 | 65.6 | 52.3 |
| 1928..... | 83.8 | 64.2 | 70.9 | 53.2 |
| 1929†..... | 97.3 | 78.9 | 82.8 | 66.1 |

* Nine months

† Six months.

Obviously all these ratios will be high in times of good business and low in dull times. A marked increase in employment cannot take place without causing a change in all the other indices. This follows from the measures we are using. The query is in what order and with what intensity do the changes occur?

It would be quite possible to argue that after a severe and long-drawn-out depression, accompanied by unemployment, an increase in payrolls and, of course, in accession rates might occur without much increase in advertising. Actually the advertising is one of the first indicators to increase, but the first rise is gradual. Not until the up-building of payrolls meets the friction caused by a shortage in the supply in some essential occupations does advertising rise precipitously. When this point is reached, advertising rises above all the other indices. When the index of advertising is rising more rapidly than that of entrances or employment there is an indication that the in-

dustry has reached the saturation point in recruiting experienced employees in the nearby area at the current rates.

When conditions reverse, advertising drops far below employment. Thus only in periods when changes are gradual and moderate in character does advertising follow the same level as employment.

In upswings, the first evidence of revival is shown in entrances, the next in advertising, followed later by labor turnover; in downswings, advertising decreases first and most rapidly.

All of these ratios are affected by scarcity or surplus in the labor supply; each in turn affects the others. We cannot say in any period how high the rates will rise. The number of entrances and the number of positions offered through advertising depend both upon the expansion in the industry and the amount of turnover which must be replaced. We can say that in temporary readjustments advertising data are a valuable supplement to other data.

To confine a study of advertising to the total volume is to overlook its major usefulness. In this study, the analysis of occupational demand could have been profitably pursued much further than was attempted. We limited the analysis to industries and occupations in which other studies were being made and other personnel data available for comparison. A grouping of occupations based on the distribution of industries in the area would be more judicious and more useful.

Obviously advertising will be low in occupations in which there is a surplus of trained employees and high in those in which there is a shortage. The continuance of relatively high advertising in an occupation is an indication of the need for training and an adjustment in wage rates.

In commenting upon the metal industry, the writer stressed the relatively high demand for toolmakers and general, all-round machinists. To this list of metal occupations might be added draftsmen, electricians, welders, and

many other skilled trades. On the other hand, the study in Philadelphia gives a striking instance of lack of demand for laborers at a time when there is a pressing need for trained employees. The situation is not a passing phase of market change but one which has been growing more acute from month to month for three consecutive years.

The finding explains the contradictory statements which have been made from time to time about unemployment and opportunities for employment. There has been a shortage of experienced workmen in certain skilled occupations; there has been, at the same time, a surplus of unskilled male labor.

Though this study has not made full use of the data in indicating the relation of the demand to the numbers already employed in given occupations, it is this aspect of the data which prompted the experimental analysis and it is this aspect which warrants further study. The positions offered through advertising afford a means of judging the trend of demand between occupations and industries. This furnishes at least a starting point for training programs. It is necessary to supplement it by knowledge of the number of positions in the occupation. These phenomena, studied over a long period, give an indication of the permanent changes dominating the intricate criss-crossing in occupational demand—changes which must be considered if there is any deliberate attempt to guide young people into the channels where the need and the future opportunities are likely to be greatest.

The complexity of the organization of industry and the tempo of its changes make it difficult to anticipate the opportunities of an occupation. Doubtless, young people will select occupations pretty much on the assumption that the future opportunities of each trade will remain much as they were at the time of selection. Yet, as Marshall aptly says, "economic progress brings with it on the one hand a constantly increasing changefulness in the methods of industry,

and therefore a constantly increasing difficulty of predicting the demand for labor of any kind a generation ahead.”¹ However, some forethought is possible. In so far as conditions in the present are influenced by the past, and future conditions, in turn, are influenced by present conditions, there is an opportunity for some anticipation. Such preparedness as is possible must rest upon an accumulated body of reliable data. No industry and no training program can afford to proceed without a knowledge of the numbers in the major occupations, and the evidence of probable increase or diminution in the demand for different grades of work.

In emergency situations, the advertising for an occupation may be out of all proportion to the actual number of positions in the industry. Probably, at such times, there is a good deal of elasticity in the way in which executives can meet the exigency by promotion from closely-related occupations. However, in each boom period, the process of “doing business as usual” proceeds through the phase of mild increase followed by feverish advertising, only to end in an unexpected and abrupt dip as manufacturing orders are curtailed. The student of industry wonders at what stage in advertising the total number employed in the occupation or the industry was greatest, or at what stage the advertising was effective merely in attracting those already engaged in the occupation from one plant to another. Much information useful in future training could be given if the process by which training of workers from allied occupations was adapted to meet the period of maximum employment, were known. Future study should consequently be directed to serve both the problem of indicating the general trend of employment in a group of related occupations and the changes effected in periods of emergency adjustment.

¹ Alfred Marshall, *Principles of Economics* (8th ed. London, 1920), p. 573.

APPENDIX

The data for Philadelphia presented in this study are based upon advertising in morning, evening, and Sunday papers. The Philadelphia *Public Ledger* was tabulated for morning, evening, and Sunday editions; the *Inquirer* for morning and Sunday; the *Bulletin* for evening. Previous to May 1925, when it was merged with the *Public Ledger*, the daily and Sunday editions of the *North American* were included in this tabulation. The various "extras" and special editions issued throughout the day are omitted. No attempt is made to include newspapers issued in foreign languages or advertising in non-secular or technical papers. By an oversight the *Record* was omitted during our earlier years and has consequently not been included in any of the data of this study.

The inclusion of all standard widely-read daily and Sunday papers in the city means a representation of a weekly circulation of 6.2 million copies of daily papers in addition to 976 thousand copies of Sunday papers. In itself, the circulation indicates somewhat the fact that the papers reach not only the metropolitan area of Philadelphia, but a considerable radius beyond the nearby suburbs. On the ground of comprehensiveness the data may be regarded as complete enough to be fully representative.

The data for Chicago, Indianapolis, Minneapolis, New York, and St. Louis are based on the lineage of one paper in each area. The lineage of these papers classified by advertising for men and for women were supplied by the papers.

For Philadelphia, the whole attempt to classify major industries and occupations was experimental. Some of the selection was conditioned by the existence of other data with which the advertising could be compared. The isolation of a selected group of occupations proved easier than the alloca-

tion of advertising to industries. This would be inevitable from the fact that if any results are to be obtained by the concern placing the advertising it must make the occupation reasonably clear. Of the total advertising in 1926, 63.1 per cent was classified for occupations but only 21.9 per cent for industries. The remaining lines in each case were undistributed.

The problem was to select from the great variety a small list of occupations peculiar to particular industries and specific enough to represent some of its skilled work. A large amount of advertising space is accounted for by the separation of lines devoted to domestic employment in private homes, hotels, and restaurants; still more is involved in the recruiting of salesmen, canvassers, and clerical employees. The separate industrial occupations represent a small space for any one group. The essential character of an occupation which would make it likely that fluctuations would correspond with other employment in the industry somewhat determined the selection of the 22 occupations isolated in the manufacturing industries. If an analysis were made in other cities, doubtless a quite different list of occupations than was used would be desirable.

The occupations, arranged alphabetically, as they are in want columns, can be classified more easily and more accurately than the total advertising of an industry. Besides, in our area this has been the more useful information and in reorganizing the study more occupations will be isolated.

The reason for attempting the classification of leading industries is that employment and turnover data were not available for occupations. But a prohibitive amount of time as well as an arbitrary use of definitions would have been required to classify all the leading industries.

As a preliminary to the detailed analysis three groupings were made, the first separating the advertising for men and women, the second separating the lines of *regular* or non-display items from lines represented by display items, and

the third the volume of demand from sources outside the Philadelphia market.

The first two groupings seem to have significance at the turning points of industrial revival. The third grouping of the amount of advertising from sources outside the market yielded little of interest. In the six years included in this study the outside advertising has been unimportant except in spring peaks when road construction and building work were being undertaken. The peaks at this time probably mean that a large percentage of the advertising is really by Philadelphia contractors working in various parts of the state.

The result of separating the advertising of employment bureaus from the total was too negative to warrant the additional labor. These negative results are noted since the items appeared in the list of subdivisions used in classification.

TABLE 1A
INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
PHILADELPHIA, CHICAGO, ST. LOUIS
(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| <i>Philadelphia</i> | | | | | | | | | | | | |
| 1923.... | | | | 172.9 | 183.9 | 144.7 | 95.1 | 101.0 | 146.0 | 136.9 | 106.5 | 49.6 |
| 1924.... | 94.9 | 77.3 | 90.9 | 92.0 | 78.5 | 60.2 | 49.2 | 55.1 | 87.5 | 83.5 | 75.0 | 54.1 |
| 1925.... | 69.9 | 74.3 | 78.8 | 81.7 | 82.0 | 87.0 | 65.8 | 70.5 | 136.6 | 130.2 | 108.0 | 65.6 |
| 1926.... | 85.0 | 79.0 | 107.8 | 108.5 | 123.8 | 97.4 | 77.9 | 94.2 | 142.4 | 125.0 | 106.5 | 52.5 |
| 1927.... | 61.8 | 66.2 | 75.4 | 81.1 | 76.6 | 64.9 | 52.0 | 51.6 | 84.0 | 72.3 | 62.5 | 40.0 |
| 1928.... | 50.2 | 51.2 | 57.7 | 63.2 | 63.7 | 65.7 | 52.0 | 57.2 | 79.4 | 73.5 | 58.8 | 46.6 |
| 1929.... | 57.6 | 57.8 | 64.9 | 74.9 | 72.9 | 69.1 | 51.1 | 58.5 | | | | |
| <i>Chicago Tribune</i> | | | | | | | | | | | | |
| 1923.... | 104.2 | 118.0 | 132.3 | 149.0 | 155.5 | 124.2 | 93.5 | 98.7 | 122.4 | 95.7 | 75.6 | 59.4 |
| 1924.... | 73.3 | 73.4 | 82.1 | 84.1 | 77.0 | 66.9 | 58.2 | 66.1 | 72.5 | 70.5 | 66.4 | 54.2 |
| 1925.... | 73.5 | 75.4 | 84.9 | 83.8 | 86.0 | 90.2 | 87.4 | 103.6 | 116.0 | 117.6 | 106.1 | 72.9 |
| 1926.... | 113.6 | 102.6 | 111.9 | 106.2 | 113.3 | 103.9 | 83.9 | 98.6 | 114.7 | 105.3 | 84.9 | 58.4 |
| 1927.... | 89.5 | 84.8 | 87.2 | 87.5 | 90.5 | 92.9 | 78.8 | 80.4 | 85.9 | 82.4 | 70.0 | 48.3 |
| 1928.... | 70.5 | 67.4 | 66.3 | 71.2 | 71.0 | 70.5 | 66.3 | 71.3 | 81.3 | 78.7 | 64.9 | 54.8 |
| 1929.... | 80.1 | 81.1 | 88.1 | 90.6 | 82.4 | | | | | | | |
| <i>St. Louis Globe-Democrat</i> | | | | | | | | | | | | |
| 1923.... | 168.6 | 167.9 | 192.7 | 215.0 | 225.6 | 198.0 | 150.9 | 156.2 | 202.5 | 153.3 | 117.3 | 93.0 |
| 1924.... | 103.6 | 110.4 | 122.3 | 120.9 | 99.5 | 90.2 | 79.3 | 101.1 | 115.6 | 100.2 | 88.7 | 71.6 |
| 1925.... | 89.5 | 95.5 | 113.3 | 113.3 | 98.3 | 106.1 | 92.3 | 111.5 | 159.9 | 135.1 | 110.0 | 80.0 |
| 1926.... | 103.3 | 96.4 | 101.6 | 100.4 | 114.0 | 97.5 | 88.0 | 106.5 | 141.3 | 104.8 | 80.2 | 63.1 |
| 1927.... | 77.6 | 74.5 | 90.7 | 83.7 | 80.9 | 78.7 | 69.4 | 69.1 | 92.7 | 89.7 | 68.6 | 51.6 |
| 1928.... | 64.5 | 62.0 | 69.7 | 84.5 | 84.6 | 72.2 | 71.1 | 76.3 | 101.4 | 81.9 | 68.1 | 53.6 |
| 1929.... | 74.7 | 70.8 | 90.3 | 89.8 | 90.5 | | | | | | | |

TABLE 2A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
PHILADELPHIA,* MINNEAPOLIS, INDIANAPOLIS
(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <i>Minneapolis Tribune</i> | | | | | | | | | | | | |
| 1922.... | 82.4 | 84.1 | 103.5 | 130.3 | 134.6 | 132.9 | 143.9 | 222.3 | 207.9 | 146.4 | 105.9 | 84.4 |
| 1923.... | 95.7 | 98.5 | 132.0 | 152.9 | 168.2 | 163.1 | 142.3 | 133.9 | 152.2 | 111.0 | 82.9 | 69.3 |
| 1924.... | 74.8 | 79.5 | 111.2 | 120.4 | 105.1 | 98.3 | 89.9 | 102.5 | 114.7 | 93.2 | 80.3 | 63.1 |
| 1925.... | 72.1 | 74.4 | 97.7 | 115.6 | 107.0 | 99.2 | 88.7 | 116.3 | 134.7 | 108.3 | 80.3 | 68.5 |
| 1926.... | 82.7 | 82.3 | 101.2 | 120.4 | 126.9 | 111.4 | 95.0 | 120.6 | 128.1 | 99.9 | 72.2 | 55.2 |
| 1927.... | 69.7 | 75.0 | 89.2 | 102.0 | 99.6 | 93.9 | 85.7 | 97.2 | 115.3 | 95.7 | 68.1 | 56.9 |
| 1928.... | 60.8 | 68.4 | 88.2 | 105.0 | 107.2 | 95.0 | 94.7 | 111.3 | 124.9 | 99.3 | 71.9 | 66.0 |
| 1929.... | 67.7 | 69.3 | 89.3 | 106.5 | 109.7 | | | | | | | |
| <i>Indianapolis News</i> | | | | | | | | | | | | |
| 1922.... | 67.3 | 77.5 | 90.5 | 132.3 | 151.5 | 143.9 | 170.1 | 218.9 | 233.0 | 152.1 | 129.4 | 101.3 |
| 1923.... | 116.8 | 131.8 | 206.6 | 243.2 | 242.6 | 198.3 | 133.5 | 151.8 | 177.2 | 134.9 | 95.2 | 76.2 |
| 1924.... | 88.0 | 100.3 | 100.9 | 122.2 | 99.8 | 79.4 | 59.3 | 65.4 | 95.4 | 78.0 | 70.5 | 58.7 |
| 1925.... | 70.0 | 81.6 | 90.3 | 112.5 | 99.1 | 102.2 | 93.3 | 105.5 | 118.5 | 114.2 | 91.4 | 67.9 |
| 1926.... | 83.6 | 84.9 | 104.2 | 116.3 | 116.7 | 96.2 | 91.4 | 99.8 | 134.0 | 120.6 | 85.1 | 63.4 |
| 1927.... | 69.3 | 66.8 | 92.7 | 99.0 | 77.7 | 64.6 | 61.2 | 67.0 | 80.6 | 72.6 | 64.6 | 52.7 |
| 1928.... | 55.1 | 56.5 | 71.2 | 82.3 | 79.6 | 63.7 | 55.7 | 74.0 | 85.5 | 71.3 | 61.4 | 51.6 |
| 1929.... | 76.0 | 77.8 | 89.6 | 99.1 | 90.3 | | | | | | | |

* See Table 1A for Philadelphia.

TABLE 3A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
FOR MEN AND WOMEN

CHICAGO, MINNEAPOLIS, ST. LOUIS

(Base-Average of 1926)

Chicago Tribune

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|
| Men | | | | | | | | | | | | |
| 1923.... | 84.4 | 90.0 | 106.7 | 132.9 | 129.3 | 101.3 | 81.1 | 85.4 | 106.6 | 87.5 | 70.0 | 55.7 |
| 1924.... | 68.4 | 67.5 | 76.0 | 81.3 | 75.7 | 65.4 | 57.6 | 63.9 | 69.5 | 71.0 | 67.4 | 55.6 |
| 1925.... | 73.7 | 74.4 | 80.8 | 84.2 | 86.1 | 87.8 | 86.9 | 103.7 | 113.5 | 120.2 | 107.4 | 72.0 |
| 1926.... | 110.7 | 105.0 | 111.3 | 108.2 | 114.1 | 100.8 | 82.8 | 97.4 | 111.2 | 105.8 | 83.4 | 58.6 |
| 1927.... | 91.4 | 86.6 | 86.9 | 88.4 | 94.9 | 93.2 | 79.4 | 79.2 | 83.8 | 85.0 | 72.7 | 50.0 |
| 1928.... | 74.0 | 70.9 | 71.2 | 73.2 | 67.7 | 68.6 | 68.0 | 75.4 | 81.9 | 79.3 | 64.9 | 53.3 |
| 1929.... | 79.6 | 82.8 | 87.7 | 88.8 | 79.1 | | | | | | | |

| | | | | | | | | | | | | |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Women | | | | | | | | | | | | |
| 1923.... | 150.4 | 183.0 | 102.2 | 187.3 | 216.6 | 177.2 | 122.7 | 129.9 | 159.5 | 114.8 | 88.8 | 68.2 |
| 1924.... | 84.5 | 87.2 | 96.3 | 90.6 | 80.0 | 70.3 | 59.7 | 71.3 | 79.7 | 67.7 | 63.9 | 51.3 |
| 1925.... | 73.2 | 77.7 | 87.7 | 83.0 | 85.7 | 95.8 | 88.5 | 103.4 | 121.6 | 111.8 | 102.8 | 74.9 |
| 1926.... | 106.4 | 97.1 | 113.7 | 101.3 | 111.2 | 111.1 | 81.6 | 101.6 | 122.6 | 104.3 | 88.5 | 57.9 |
| 1927.... | 85.2 | 80.7 | 87.9 | 85.4 | 100.2 | 92.3 | 77.4 | 83.3 | 90.7 | 81.3 | 63.4 | 44.3 |
| 1928.... | 62.4 | 58.8 | 61.6 | 65.5 | 71.6 | 71.6 | 66.3 | 79.2 | 89.0 | 77.5 | 64.7 | 58.5 |
| 1929.... | 81.1 | 77.1 | 89.1 | 94.6 | 90.2 | | | | | | | |

Minneapolis Tribune

Men

| | | | | | | | | | | | | |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1922.... | 88.9 | 92.8 | 104.3 | 133.7 | 131.2 | 126.8 | 152.7 | 266.1 | 232.6 | 153.9 | 112.4 | 88.7 |
| 1923.... | 99.6 | 102.9 | 130.9 | 146.4 | 163.6 | 153.4 | 147.4 | 134.7 | 142.3 | 112.5 | 85.4 | 71.8 |
| 1924.... | 82.1 | 83.9 | 116.6 | 120.5 | 100.2 | 97.3 | 90.3 | 102.2 | 102.2 | 88.9 | 77.8 | 65.5 |
| 1925.... | 74.7 | 79.8 | 99.4 | 109.4 | 101.7 | 93.5 | 88.4 | 116.4 | 120.5 | 103.5 | 82.7 | 70.4 |
| 1926.... | 84.9 | 86.6 | 107.8 | 122.1 | 122.4 | 109.2 | 95.6 | 117.6 | 116.2 | 100.9 | 76.4 | 56.4 |
| 1927.... | 72.8 | 81.6 | 89.8 | 101.1 | 93.5 | 93.8 | 85.4 | 93.9 | 100.8 | 93.4 | 66.5 | 56.9 |
| 1928.... | 70.7 | 73.5 | 87.0 | 98.9 | 101.2 | 89.4 | 90.7 | 103.3 | 112.0 | 95.2 | 74.0 | 69.1 |
| 1929.... | 68.6 | 73.9 | 93.2 | 103.8 | 105.1 | | | | | | | |

Women

| | | | | | | | | | | | | |
|----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1922.... | 69.9 | 67.5 | 102.1 | 123.9 | 141.1 | 144.2 | 127.5 | 140.1 | 161.6 | 132.3 | 93.5 | 76.4 |
| 1923.... | 88.6 | 90.1 | 134.2 | 165.0 | 176.6 | 181.5 | 132.8 | 132.2 | 170.8 | 107.9 | 78.2 | 64.6 |
| 1924.... | 61.0 | 71.2 | 101.0 | 120.1 | 114.2 | 100.2 | 89.1 | 103.3 | 138.0 | 101.2 | 85.0 | 58.7 |
| 1925.... | 67.3 | 64.3 | 94.4 | 127.3 | 117.1 | 109.9 | 89.1 | 116.1 | 161.3 | 117.3 | 75.7 | 65.2 |
| 1926.... | 78.4 | 74.5 | 88.6 | 117.2 | 135.4 | 115.5 | 94.0 | 126.4 | 150.8 | 98.0 | 64.2 | 53.0 |
| 1927.... | 63.7 | 62.6 | 88.1 | 106.5 | 110.9 | 94.2 | 86.4 | 103.3 | 142.5 | 100.0 | 71.2 | 56.9 |
| 1928.... | 68.1 | 58.8 | 90.3 | 116.4 | 118.6 | 105.7 | 102.4 | 126.1 | 149.1 | 107.0 | 68.0 | 60.1 |
| 1929.... | 66.1 | 60.9 | 82.1 | 111.5 | 118.1 | | | | | | | |

HELP-WANTED ADVERTISING

TABLE 3A (Continued)
 INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
 FOR MEN AND WOMEN
 CHICAGO, MINNEAPOLIS, ST. LOUIS
 (Base-Average of 1926)
St. Louis Globe-Democrat

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Men | | | | | | | | | | | | |
| 1922.... | 80.7 | 83.3 | 89.1 | 107.5 | 102.4 | 131.6 | 250.3 | 302.7 | 306.3 | 242.3 | 178.8 | 139.8 |
| 1923.... | 152.6 | 159.9 | 181.8 | 213.9 | 223.6 | 180.3 | 149.0 | 141.0 | 179.3 | 143.0 | 107.9 | 85.1 |
| 1924.... | 94.9 | 103.6 | 114.5 | 115.7 | 100.6 | 92.9 | 85.5 | 99.6 | 107.6 | 100.4 | 92.8 | 69.5 |
| 1925.... | 86.1 | 91.5 | 112.3 | 111.2 | 104.5 | 110.7 | 92.8 | 113.4 | 152.2 | 139.6 | 116.7 | 82.4 |
| 1926.... | 107.4 | 98.7 | 104.8 | 103.2 | 114.9 | 98.9 | 90.0 | 103.6 | 129.4 | 101.7 | 81.5 | 62.0 |
| 1927.... | 75.5 | 75.5 | 93.8 | 79.7 | 84.2 | 83.2 | 74.1 | 69.8 | 87.2 | 92.7 | 73.8 | 54.9 |
| 1928.... | 66.5 | 66.0 | 72.6 | 85.2 | 86.8 | 74.0 | 74.7 | 76.4 | 97.7 | 85.1 | 73.2 | 57.6 |
| 1929.... | 78.7 | 73.6 | 98.6 | 97.6 | 96.0 | | | | | | | |
| Women | | | | | | | | | | | | |
| 1922.... | 98.0 | 101.4 | 115.3 | 107.1 | 102.0 | 136.5 | 108.7 | 136.7 | 188.5 | 207.5 | 175.9 | 157.3 |
| 1923.... | 203.3 | 205.0 | 216.2 | 217.2 | 230.6 | 236.6 | 155.0 | 189.0 | 253.4 | 175.8 | 137.6 | 110.0 |
| 1924.... | 122.5 | 125.2 | 139.3 | 132.4 | 97.2 | 84.2 | 65.6 | 104.3 | 133.1 | 99.8 | 79.8 | 76.3 |
| 1925.... | 96.9 | 104.1 | 115.5 | 118.1 | 85.0 | 95.9 | 91.1 | 107.5 | 176.4 | 125.5 | 95.5 | 75.1 |
| 1926.... | 94.4 | 91.3 | 94.4 | 94.3 | 112.2 | 94.3 | 81.5 | 112.7 | 167.1 | 111.7 | 77.3 | 65.5 |
| 1927.... | 82.1 | 72.5 | 83.8 | 92.4 | 73.8 | 68.7 | 59.2 | 67.6 | 104.6 | 83.4 | 57.0 | 44.2 |
| 1928.... | 60.1 | 53.3 | 63.4 | 83.4 | 80.0 | 68.2 | 63.3 | 76.2 | 109.7 | 75.0 | 57.3 | 45.1 |
| 1929.... | 65.9 | 65.1 | 72.3 | 72.9 | 78.7 | | | | | | | |

TABLE 4A
 INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
 FOR MEN AND WOMEN
 PHILADELPHIA
 (Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Men | | | | | | | | | | | | |
| 1923.... | | | | 173.5 | 187.0 | 138.7 | 103.1 | 98.9 | 135.5 | 117.9 | 87.8 | 49.5 |
| 1924.... | 77.3 | 66.4 | 79.9 | 84.0 | 67.6 | 57.0 | 54.3 | 56.4 | 82.9 | 79.4 | 67.1 | 48.3 |
| 1925.... | 61.1 | 63.5 | 74.3 | 77.7 | 82.2 | 83.5 | 68.3 | 72.4 | 134.9 | 123.5 | 103.3 | 62.6 |
| 1926.... | 83.4 | 83.3 | 110.6 | 108.3 | 127.8 | 104.2 | 85.8 | 94.8 | 139.5 | 114.6 | 97.6 | 59.1 |
| 1927.... | 58.1 | 63.8 | 70.9 | 78.1 | 69.0 | 64.0 | 57.1 | 54.7 | 79.6 | 67.6 | 62.8 | 41.2 |
| 1928.... | 52.9 | 54.4 | 62.1 | 65.4 | 68.5 | 68.8 | 57.0 | 60.6 | 84.9 | 74.0 | 59.0 | 49.7 |
| 1929.... | 55.4 | 55.8 | 67.7 | 74.0 | 73.8 | 66.0 | 54.6 | 62.5 | | | | |
| Women | | | | | | | | | | | | |
| 1923.... | | | | 171.9 | 178.3 | 155.8 | 80.6 | 104.8 | 165.0 | 171.4 | 140.4 | 49.7 |
| 1924.... | 126.8 | 97.0 | 110.9 | 106.6 | 98.1 | 65.8 | 39.8 | 52.9 | 96.0 | 90.7 | 89.2 | 64.7 |
| 1925.... | 85.7 | 94.0 | 87.0 | 88.0 | 81.7 | 93.4 | 61.3 | 67.1 | 139.7 | 142.3 | 116.7 | 71.1 |
| 1926.... | 87.7 | 71.1 | 102.8 | 109.0 | 116.5 | 85.2 | 63.5 | 93.0 | 147.0 | 144.0 | 122.6 | 56.7 |
| 1927.... | 68.5 | 79.5 | 83.5 | 86.4 | 90.3 | 66.5 | 45.5 | 46.1 | 91.0 | 80.7 | 61.8 | 37.7 |
| 1928.... | 45.3 | 45.4 | 49.8 | 59.1 | 54.9 | 60.3 | 42.8 | 51.1 | 69.5 | 72.6 | 58.4 | 40.9 |
| 1929.... | 61.5 | 61.2 | 59.9 | 76.4 | 71.2 | 74.7 | 44.9 | 51.4 | | | | |

HELP-WANTED ADVERTISING

TABLE 7A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING CLASSIFIED BY
TYPE OF ADVERTISEMENT

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|------------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Regular Advertisements | | | | | | | | | | | | |
| 1923.... | | | | 154.2 | 160.7 | 137.0 | 88.8 | 93.6 | 133.6 | 118.9 | 84.1 | 45.8 |
| 1924.... | 108.4 | 81.9 | 98.8 | 101.5 | 84.3 | 64.4 | 55.0 | 58.4 | 98.7 | 88.4 | 76.0 | 57.9 |
| 1925.... | 74.7 | 79.6 | 84.5 | 94.6 | 88.7 | 98.3 | 67.5 | 74.8 | 142.7 | 122.1 | 102.9 | 67.0 |
| 1926.... | 83.1 | 74.8 | 109.8 | 112.0 | 126.5 | 95.7 | 76.7 | 91.6 | 141.0 | 131.5 | 102.3 | 55.0 |
| 1927.... | 63.9 | 65.1 | 79.5 | 81.7 | 80.1 | 68.4 | 52.4 | 49.1 | 88.4 | 71.7 | 61.4 | 38.9 |
| 1928.... | 51.6 | 49.8 | 56.0 | 63.5 | 61.6 | 62.3 | 49.8 | 58.7 | 75.1 | 76.1 | 59.7 | 44.5 |
| 1929.... | 56.7 | 59.4 | 63.6 | 76.3 | 71.9 | 68.5 | 51.9 | 57.5 | | | | |
| Display Advertisements | | | | | | | | | | | | |
| 1923.... | | | | 230.3 | 255.0 | 168.4 | 114.4 | 123.7 | 183.8 | 192.1 | 175.2 | 61.2 |
| 1924.... | 53.6 | 72.9 | 66.6 | 62.8 | 60.6 | 47.2 | 31.2 | 45.1 | 53.3 | 68.4 | 71.7 | 42.5 |
| 1925.... | 55.3 | 58.3 | 61.4 | 42.2 | 61.5 | 52.4 | 60.6 | 57.4 | 118.0 | 155.0 | 123.7 | 61.4 |
| 1926.... | 90.7 | 91.9 | 101.8 | 98.1 | 115.4 | 102.6 | 81.4 | 102.1 | 146.8 | 105.1 | 119.2 | 44.8 |
| 1927.... | 55.5 | 69.5 | 62.9 | 79.1 | 65.9 | 54.2 | 54.6 | 59.3 | 70.4 | 73.9 | 65.8 | 43.1 |
| 1928.... | 45.9 | 55.3 | 62.7 | 62.2 | 70.0 | 76.2 | 58.7 | 52.8 | 92.6 | 65.3 | 55.9 | 52.9 |
| 1929.... | 60.1 | 52.7 | 69.1 | 70.3 | 76.0 | 71.0 | 48.9 | 61.8 | | | | |

TABLE 8A

INDICES OF HELP-WANTED ADVERTISING, NUMBER OF LINES—PHILADELPHIA*
NUMBER OF ADVERTISEMENTS—NEW YORK AND MILWAUKEE

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| New York World | | | | | | | | | | | | |
| 1922.... | 69.3 | 70.5 | 75.4 | 81.1 | 85.2 | 88.6 | 77.1 | 93.8 | 122.5 | 132.3 | 95.2 | 69.0 |
| 1923.... | 103.6 | 112.4 | 130.9 | 145.3 | 135.1 | 127.0 | 96.8 | 104.6 | 92.2 | 121.4 | 77.7 | 56.9 |
| 1924.... | 78.0 | 77.3 | 93.3 | 95.0 | 81.2 | 71.3 | 58.8 | 76.0 | 114.2 | 96.4 | 71.8 | 57.9 |
| 1925.... | 74.3 | 80.7 | 93.8 | 85.7 | 76.4 | 84.8 | 72.3 | 92.4 | 126.0 | 124.3 | 97.8 | 69.6 |
| 1926.... | 88.1 | 88.6 | 105.7 | 97.5 | 96.9 | 89.8 | 78.9 | 109.3 | 148.8 | 137.1 | 93.4 | 62.6 |
| 1927.... | 80.6 | 75.9 | 88.3 | 85.6 | 79.3 | 74.4 | 63.1 | 82.9 | 105.0 | 93.8 | 70.3 | 46.3 |
| 1928.... | 60.4 | 57.9 | 58.8 | 64.5 | 60.1 | 56.2 | 57.8 | 68.0 | 93.5 | 89.4 | 61.2 | 48.3 |
| 1929.... | 66.7 | 63.7 | 73.1 | 74.2 | 65.9 | | | | | | | |
| Milwaukee Journal | | | | | | | | | | | | |
| 1922.... | 56.5 | 60.3 | 81.3 | 112.9 | 149.8 | 137.3 | 105.3 | 126.8 | 166.3 | 164.9 | 115.5 | 79.1 |
| 1923.... | 100.0 | 139.5 | 177.8 | 242.4 | 266.2 | 195.4 | 144.6 | 145.1 | 180.1 | 127.8 | 77.5 | 53.6 |
| 1924.... | 62.4 | 71.7 | 91.9 | 114.9 | 102.1 | 80.2 | 70.5 | 75.4 | 103.1 | 84.5 | 70.8 | 51.2 |
| 1925.... | 59.1 | 72.8 | 91.3 | 120.1 | 127.8 | 112.2 | 85.5 | 104.1 | 141.6 | 122.6 | 85.9 | 49.6 |
| 1926.... | 67.3 | 76.8 | 96.4 | 120.8 | 146.0 | 115.0 | 90.2 | 108.4 | 143.9 | 116.9 | 68.8 | 45.5 |
| 1927.... | 55.7 | 57.6 | 82.3 | 98.0 | 111.5 | 100.1 | 85.1 | 95.5 | 116.3 | 81.5 | 52.3 | 35.6 |
| 1928.... | 48.9 | 54.7 | 67.8 | 96.0 | 125.9 | 109.4 | 83.2 | 95.4 | 117.4 | 95.2 | 60.0 | 46.8 |
| 1929.... | 62.1 | 63.6 | 92.0 | 125.6 | | | | | | | | |

* For Philadelphia see 1A, page 85.

TABLE 9A

NUMBER OF LINES, WEEKLY, OF HELP-WANTED ADVERTISING BY AUTOMOBILE, BUILDING, METAL-MANUFACTURING, AND TEXTILE INDUSTRIES

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Automobile | | | | | | | | | | | | |
| 1923.... | | | | 1,584 | 1,752 | 1,717 | 1,158 | 753 | 649 | 820 | 842 | 378 |
| 1924.... | 590 | 765 | 1,066 | 1,305 | 952 | 907 | 968 | 535 | 1,192 | 571 | 1,081 | 639 |
| 1925.... | 668 | 1,006 | 1,385 | 1,196 | 1,303 | 1,499 | 1,254 | 1,101 | 1,526 | 1,402 | 1,205 | 705 |
| 1926.... | 1,416 | 1,161 | 2,668 | 2,276 | 2,495 | 1,079 | 1,543 | 1,348 | 970 | 740 | 881 | 571 |
| 1927.... | 559 | 609 | 958 | 1,188 | 679 | 559 | 660 | 815 | 894 | 375 | 500 | 320 |
| 1928.... | 471 | 762 | 554 | 1,343 | 430 | 541 | 521 | 607 | 909 | 842 | 594 | 686 |
| 1929.... | 1,088 | 920 | 879 | 836 | 844 | 955 | 421 | 1,393 | | | | |
| Building | | | | | | | | | | | | |
| 1923.... | | | | 3,749 | 5,061 | 3,288 | 3,150 | 3,170 | 5,169 | 3,875 | 2,281 | 938 |
| 1924.... | 1,195 | 879 | 1,305 | 2,145 | 1,993 | 1,416 | 1,420 | 1,423 | 1,602 | 2,444 | 1,893 | 1,035 |
| 1925.... | 915 | 1,212 | 1,823 | 2,845 | 2,985 | 2,620 | 2,594 | 3,079 | 3,759 | 4,394 | 2,577 | 1,005 |
| 1926.... | 848 | 599 | 1,300 | 2,631 | 3,241 | 1,996 | 1,976 | 2,466 | 2,419 | 2,814 | 2,856 | 816 |
| 1927.... | 622 | 831 | 1,007 | 1,779 | 2,030 | 1,015 | 1,257 | 1,134 | 1,101 | 1,254 | 936 | 605 |
| 1928.... | 237 | 368 | 320 | 766 | 871 | 590 | 821 | 897 | 1,178 | 1,467 | 744 | 235 |
| 1929.... | 177 | 351 | 463 | 852 | 923 | 545 | 555 | 758 | | | | |
| Metal-manufacturing | | | | | | | | | | | | |
| 1923.... | | | | 9,587 | 8,923 | 6,164 | 6,190 | 3,982 | 4,082 | 4,809 | 1,924 | 1,572 |
| 1924.... | 2,208 | 1,826 | 2,205 | 1,459 | 1,489 | 1,112 | 1,164 | 1,411 | 1,457 | 2,028 | 1,800 | 1,520 |
| 1925.... | 2,124 | 2,425 | 2,521 | 2,398 | 2,606 | 3,095 | 2,748 | 2,079 | 5,424 | 3,938 | 2,809 | 2,291 |
| 1926.... | 2,985 | 3,174 | 7,244 | 6,785 | 7,298 | 6,100 | 5,215 | 7,403 | 3,532 | 2,686 | 2,131 | 2,137 |
| 1927.... | 3,240 | 3,039 | 2,704 | 3,393 | 3,115 | 2,754 | 2,904 | 2,451 | 2,545 | 1,743 | 1,759 | 1,163 |
| 1928.... | 1,148 | 1,698 | 1,937 | 2,539 | 3,117 | 3,840 | 2,737 | 2,677 | 3,677 | 3,504 | 2,466 | 2,029 |
| 1929.... | 2,838 | 1,712 | 3,173 | 4,378 | 3,732 | 3,236 | 3,105 | 3,238 | | | | |
| Textile | | | | | | | | | | | | |
| 1923.... | | | | 2,562 | 3,344 | 1,913 | 1,211 | 987 | 2,179 | 2,040 | 1,694 | 1,013 |
| 1924.... | 1,516 | 2,039 | 1,305 | 1,113 | 841 | 421 | 488 | 773 | 1,118 | 2,243 | 2,027 | 2,448 |
| 1925.... | 1,848 | 2,043 | 2,416 | 1,976 | 1,808 | 1,898 | 2,008 | 1,559 | 2,720 | 2,223 | 1,432 | 1,200 |
| 1926.... | 1,091 | 754 | 1,714 | 1,255 | 1,439 | 1,321 | 1,360 | 1,939 | 1,687 | 2,184 | 1,801 | 926 |
| 1927.... | 1,234 | 1,337 | 1,232 | 1,911 | 1,259 | 828 | 737 | 805 | 1,359 | 1,088 | 1,091 | 522 |
| 1928.... | 702 | 757 | 592 | 611 | 841 | 649 | 696 | 881 | 1,584 | 1,228 | 1,172 | 883 |
| 1929.... | 1,229 | 1,651 | 1,629 | 1,147 | 1,125 | 964 | 678 | 907 | | | | |

TABLE 10A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE BUILDING INDUSTRY AND ALL INDUSTRIES*

PHILADELPHIA

(Base-Average of 1926)

Building Trades

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1923.... | | | | 187.7 | 253.4 | 164.6 | 157.7 | 159.2 | 258.8 | 194.0 | 114.2 | 47.0 |
| 1924.... | 59.8 | 44.0 | 65.3 | 107.4 | 99.8 | 70.9 | 71.1 | 71.3 | 80.2 | 122.4 | 94.8 | 51.8 |
| 1925.... | 45.8 | 60.7 | 91.3 | 142.5 | 149.5 | 131.2 | 129.9 | 154.2 | 188.2 | 220.0 | 129.0 | 50.3 |
| 1926.... | 42.5 | 30.0 | 65.1 | 131.7 | 162.3 | 99.9 | 98.9 | 123.5 | 121.1 | 140.9 | 143.0 | 40.9 |
| 1927.... | 31.1 | 41.6 | 50.4 | 89.1 | 101.7 | 50.8 | 62.9 | 56.8 | 55.1 | 62.8 | 46.9 | 30.3 |
| 1928.... | 11.9 | 18.4 | 16.0 | 38.4 | 43.6 | 29.5 | 41.1 | 44.9 | 59.0 | 73.5 | 37.3 | 11.8 |
| 1929.... | 8.9 | 17.6 | 23.2 | 42.7 | 46.2 | 27.3 | 27.8 | 38.0 | | | | |

* For All Industries see 1A, Philadelphia, page 85.

TABLE 11A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE BUILDING INDUSTRY* AND FOR SKILLED BUILDING OCCUPATIONS

PHILADELPHIA

(Base-Average of 1926)

Building Occupations

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1923.... | | | | 238.3 | 223.3 | 204.1 | 218.3 | 183.4 | 280.8 | 223.0 | 124.4 | 41.0 |
| 1924.... | 60.7 | 52.7 | 75.2 | 117.0 | 116.7 | 78.5 | 79.0 | 79.8 | 87.2 | 112.6 | 75.6 | 29.6 |
| 1925.... | 26.5 | 39.5 | 60.5 | 111.2 | 130.4 | 108.9 | 102.7 | 124.8 | 176.5 | 213.4 | 81.0 | 46.7 |
| 1926.... | 61.7 | 45.9 | 111.1 | 124.2 | 139.0 | 105.0 | 71.2 | 105.6 | 126.3 | 139.8 | 136.5 | 33.9 |
| 1927.... | 11.8 | 51.1 | 68.0 | 73.5 | 59.8 | 37.5 | 39.6 | 57.3 | 40.6 | 48.4 | 46.7 | 17.7 |
| 1928.... | 9.0 | 14.9 | 15.6 | 34.9 | 39.8 | 35.3 | 47.3 | 42.4 | 43.3 | 57.6 | 28.8 | 10.4 |
| 1929.... | 10.2 | 20.1 | 18.6 | 36.4 | 44.4 | 38.4 | 30.4 | 49.4 | | | | |

*For Building Industry see 10A, page 91.

TABLE 12A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE AUTOMOBILE, METAL-MANUFACTURING AND ALL INDUSTRIES*

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| Automobile | | | | | | | | | | | | |
| 1923.... | | | | 107.1 | 118.5 | 116.1 | 78.3 | 50.9 | 43.0 | 55.4 | 56.9 | 25.6 |
| 1924.... | 40.5 | 51.7 | 72.1 | 88.2 | 64.4 | 61.3 | 65.4 | 36.2 | 80.6 | 38.6 | 73.1 | 43.2 |
| 1925.... | 45.2 | 74.1 | 93.6 | 80.9 | 92.2 | 101.4 | 84.8 | 74.4 | 103.2 | 94.8 | 81.5 | 47.7 |
| 1926.... | 95.7 | 78.5 | 180.4 | 153.9 | 168.7 | 113.5 | 104.3 | 91.1 | 65.6 | 50.0 | 59.6 | 38.0 |
| 1927.... | 37.8 | 41.2 | 64.8 | 80.3 | 45.9 | 37.8 | 44.6 | 55.1 | 60.4 | 25.4 | 33.8 | 21.6 |
| 1928.... | 31.8 | 51.5 | 37.5 | 90.8 | 29.1 | 36.6 | 35.2 | 41.1 | 61.5 | 50.9 | 40.2 | 40.4 |
| 1929.... | 73.6 | 62.2 | 59.4 | 56.5 | 57.1 | 64.6 | 28.5 | 94.2 | | | | |
| Metal | | | | | | | | | | | | |
| 1923.... | | | | 202.9 | 188.9 | 130.5 | 131.0 | 84.3 | 86.4 | 101.8 | 40.7 | 33.3 |
| 1924.... | 46.7 | 38.7 | 46.7 | 30.9 | 31.5 | 23.5 | 24.6 | 29.9 | 30.8 | 42.9 | 38.1 | 32.2 |
| 1925.... | 45.0 | 51.3 | 53.4 | 50.8 | 55.2 | 65.5 | 58.2 | 44.0 | 114.8 | 64.3 | 59.5 | 48.5 |
| 1926.... | 63.2 | 67.2 | 153.3 | 143.6 | 154.5 | 129.1 | 110.4 | 156.7 | 74.8 | 56.9 | 45.1 | 45.2 |
| 1927.... | 68.6 | 64.3 | 57.2 | 71.8 | 65.9 | 58.3 | 61.5 | 51.9 | 53.9 | 36.9 | 37.2 | 24.6 |
| 1928.... | 24.3 | 35.9 | 41.0 | 53.7 | 66.0 | 81.3 | 57.9 | 56.7 | 77.8 | 74.2 | 52.2 | 43.0 |
| 1929.... | 60.1 | 36.2 | 67.2 | 92.7 | 79.0 | 68.5 | 67.0 | 68.5 | | | | |

* For All Industries see 1A, Philadelphia, page 85.

TABLE 13A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING AND OF EMPLOYMENT IN THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE MANUFACTURE

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Help-wanted Advertising | | | | | | | | | | | | |
| 1923.... | | | | 180.1 | 172.1 | 127.0 | 118.5 | 76.3 | 76.3 | 90.7 | 44.6 | 31.4 |
| 1924.... | 45.3 | 41.8 | 52.7 | 44.6 | 39.4 | 32.5 | 34.4 | 31.4 | 42.7 | 41.9 | 46.4 | 34.8 |
| 1925.... | 45.0 | 56.8 | 63.0 | 57.9 | 64.0 | 74.1 | 64.5 | 51.3 | 112.0 | 71.6 | 64.7 | 48.3 |
| 1926.... | 70.9 | 69.9 | 159.8 | 146.1 | 157.9 | 125.4 | 108.9 | 141.1 | 72.6 | 55.2 | 48.6 | 43.7 |
| 1927.... | 61.2 | 58.8 | 59.0 | 73.9 | 61.2 | 53.4 | 57.5 | 52.7 | 55.4 | 34.1 | 36.4 | 23.9 |
| 1928.... | 26.1 | 39.7 | 40.2 | 62.6 | 57.2 | 70.6 | 52.5 | 52.9 | 73.9 | 70.1 | 49.3 | 43.8 |
| 1929.... | 63.3 | 42.4 | 65.3 | 84.1 | 73.8 | 67.6 | 57.8 | 74.7 | | | | |
| Employment | | | | | | | | | | | | |
| 1923.... | | | | 104.2 | 106.0 | 107.3 | 107.5 | 105.8 | 104.2 | 105.1 | 106.2 | 105.1 |
| 1924.... | 106.2 | 105.2 | 105.2 | 99.5 | 94.1 | 87.8 | 85.7 | 86.9 | 87.8 | 88.7 | 90.3 | 90.9 |
| 1925.... | 91.7 | 90.5 | 91.7 | 93.7 | 94.0 | 94.6 | 95.4 | 98.1 | 99.5 | 102.3 | 97.2 | 94.2 |
| 1926.... | 96.0 | 99.1 | 101.0 | 101.5 | 99.4 | 98.6 | 98.0 | 104.0 | 105.5 | 102.8 | 99.4 | 94.8 |
| 1927.... | 93.8 | 95.5 | 94.1 | 90.8 | 91.2 | 86.6 | 84.9 | 84.8 | 83.9 | 80.4 | 79.1 | 80.2 |
| 1928.... | 82.1 | 83.9 | 80.8 | 80.3 | 80.8 | 79.8 | 83.8 | 85.6 | 88.8 | 87.0 | 86.4 | 85.8 |
| 1929.... | 90.3 | 94.7 | 97.0 | 101.0 | 100.7 | 99.8 | | | | | | |

TABLE 14A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR TOOLMAKERS AND MACHINISTS

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Machinist | | | | | | | | | | | | |
| 1923.... | | | | 286.1 | 242.3 | 203.3 | 178.0 | 63.8 | 101.0 | 45.0 | 51.9 | 28.2 |
| 1924.... | 31.8 | 19.1 | 42.3 | 55.6 | 38.0 | 17.8 | 32.6 | 23.9 | 38.4 | 15.8 | 35.4 | 16.1 |
| 1925.... | 28.7 | 39.4 | 35.3 | 48.6 | 66.9 | 87.9 | 77.0 | 52.0 | 79.4 | 64.3 | 58.2 | 29.5 |
| 1926.... | 36.9 | 42.2 | 237.9 | 185.0 | 171.2 | 141.1 | 89.7 | 88.1 | 77.9 | 46.3 | 50.3 | 27.1 |
| 1927.... | 27.0 | 28.0 | 39.0 | 46.9 | 27.1 | 39.9 | 28.1 | 39.2 | 41.6 | 35.5 | 15.8 | 11.6 |
| 1928.... | 24.1 | 12.9 | 24.5 | 63.2 | 37.6 | 29.2 | 44.5 | 39.0 | 52.9 | 88.7 | 69.0 | 36.7 |
| 1929.... | 52.2 | 38.9 | 65.4 | 108.1 | 95.2 | 105.0 | 73.7 | 87.1 | | | | |
| Toolmaker | | | | | | | | | | | | |
| 1923.... | | | | 115.3 | 323.8 | 226.8 | 271.9 | 309.8 | 24.3 | 280.8 | 21.7 | 31.5 |
| 1924.... | 51.5 | 42.1 | 122.1 | 37.9 | 11.5 | 18.7 | 16.2 | 24.7 | 88.9 | 34.5 | 48.9 | 37.4 |
| 1925.... | 23.0 | 23.8 | 58.3 | 36.2 | 75.3 | 73.6 | 116.2 | 56.6 | 233.2 | 56.2 | 48.5 | 63.8 |
| 1926.... | 44.7 | 60.4 | 157.4 | 147.2 | 152.3 | 117.0 | 86.4 | 148.9 | 114.0 | 95.3 | 59.6 | 16.6 |
| 1927.... | 37.4 | 26.8 | 25.5 | 25.1 | 27.7 | 38.3 | 11.1 | 56.6 | 39.6 | 29.8 | 8.9 | 62.6 |
| 1928.... | 23.4 | 37.9 | 40.9 | 160.4 | 95.7 | 161.7 | 119.1 | 43.8 | 171.5 | 254.5 | 159.1 | 123.8 |
| 1929.... | 164.7 | 71.9 | 171.9 | 300.4 | 140.4 | 104.7 | 125.1 | 168.9 | | | | |

TABLE 15A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR MOLDERS
AND PATTERNMAKERS

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| Molder | | | | | | | | | | | | |
| 1923.... | | | | 635.2 | 420.5 | 151.1 | 97.7 | 39.8 | 58.0 | 90.9 | 33.0 | 48.9 |
| 1924.... | 194.3 | 37.5 | 55.7 | 39.7 | 37.5 | | 18.2 | 28.4 | | 18.2 | 48.9 | 45.5 |
| 1925.... | 28.4 | 50.0 | 103.4 | 39.8 | 54.5 | 51.1 | 105.7 | 15.9 | 86.4 | 376.1 | 39.8 | 27.3 |
| 1926.... | 48.9 | 275.0 | 140.9 | 39.8 | 277.3 | 79.5 | 33.0 | 62.5 | 76.1 | 108.0 | 25.0 | 28.4 |
| 1927.... | 17.0 | 17.0 | 31.8 | 45.5 | 35.2 | 13.6 | 14.8 | 36.4 | | 4.5 | 26.1 | |
| 1928.... | 15.9 | 9.1 | 11.4 | 133.0 | 46.6 | 47.7 | 39.8 | 9.1 | 30.7 | 127.3 | 26.1 | 8.0 |
| 1929.... | | 18.2 | 30.7 | 23.9 | 31.8 | 19.3 | 60.2 | 45.5 | | | | |
| Patternmaker | | | | | | | | | | | | |
| 1923.... | | | | 118.3 | 35.6 | 15.4 | 5.8 | 11.5 | 29.8 | 23.1 | 13.5 | 32.7 |
| 1924.... | 13.5 | 3.8 | 4.8 | 9.6 | 39.4 | | 26.9 | 5.8 | 42.3 | 15.4 | | 20.2 |
| 1925.... | 58.7 | 14.4 | 79.8 | 22.1 | 38.5 | 66.3 | 11.5 | | 3.8 | 26.9 | 71.2 | 49.0 |
| 1926.... | 33.7 | 150.0 | 154.8 | 127.9 | 159.6 | 32.7 | 39.4 | 383.7 | 59.6 | 13.5 | 40.4 | 1.9 |
| 1927.... | 13.5 | | 51.9 | 34.6 | 22.1 | 80.8 | 19.2 | 41.3 | 89.4 | | 14.4 | 6.7 |
| 1928.... | 21.2 | 23.1 | 18.3 | 33.7 | 4.8 | 6.7 | 15.4 | 3.8 | 30.8 | 17.3 | 9.6 | 27.9 |
| 1929.... | 45.2 | 14.4 | 42.3 | 43.3 | 101.0 | 5.8 | 18.3 | 196.2 | | | | |

TABLE 16A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR BLACKSMITHS,
SHEET-METAL WORKERS, AND WELDERS

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| Blacksmith | | | | | | | | | | | | |
| 1923.... | | | | 284.4 | 221.9 | 406.3 | 303.1 | 123.4 | 128.1 | 45.3 | 45.3 | 73.4 |
| 1924.... | 67.2 | 39.1 | 67.2 | 59.4 | 89.1 | 39.1 | 71.9 | 57.8 | 39.1 | 39.1 | 32.8 | 37.5 |
| 1925.... | 25.0 | 23.4 | 79.7 | 104.7 | 110.9 | 121.9 | 170.3 | 60.9 | 104.7 | 59.4 | 67.2 | 70.3 |
| 1926.... | 31.3 | 40.6 | 132.8 | 137.5 | 176.6 | 115.6 | 103.1 | 160.9 | 123.4 | 70.3 | 71.9 | 28.1 |
| 1927.... | 12.5 | 21.9 | 32.8 | 57.8 | 12.5 | 92.2 | 50.0 | 21.9 | 18.8 | 40.6 | 42.2 | 23.4 |
| 1928.... | 9.4 | 14.1 | 71.9 | 62.5 | 21.9 | 10.9 | 12.5 | 56.3 | 109.4 | 50.0 | 43.8 | 15.6 |
| 1929.... | 20.3 | 14.1 | 17.2 | 45.3 | 67.2 | 59.4 | 39.1 | 20.3 | | | | |
| Sheet Metal Worker | | | | | | | | | | | | |
| 1923.... | | | | 195.6 | 278.1 | 161.0 | 152.6 | 66.8 | 128.8 | 94.5 | 79.9 | 13.7 |
| 1924.... | 43.0 | 60.3 | 52.4 | 22.1 | 28.0 | 36.5 | 26.8 | 39.0 | 74.5 | 43.0 | 39.2 | 17.8 |
| 1925.... | 21.9 | 26.5 | 64.0 | 55.4 | 31.2 | 47.4 | 50.4 | 55.8 | 121.4 | 69.7 | 22.3 | 53.3 |
| 1926.... | 99.7 | 84.8 | 92.1 | 196.3 | 80.6 | 78.6 | 93.3 | 162.5 | 135.0 | 110.9 | 41.9 | 24.3 |
| 1927.... | 45.7 | 37.0 | 24.3 | 49.4 | 29.8 | 36.2 | 20.6 | 17.4 | 44.2 | 26.0 | 77.7 | 18.9 |
| 1928.... | 20.9 | 68.8 | 20.3 | 96.3 | 14.9 | 39.9 | 31.7 | 45.1 | 45.4 | 51.9 | 47.1 | 81.7 |
| 1929.... | 108.9 | 52.9 | 80.7 | 35.7 | 54.8 | 80.1 | 55.9 | 116.1 | | | | |
| Welder | | | | | | | | | | | | |
| 1923.... | | | | 65.1 | 66.9 | 36.1 | 43.2 | 36.1 | 201.2 | 27.2 | 19.5 | 38.5 |
| 1924.... | 9.5 | 24.9 | 30.8 | 20.1 | 24.9 | 5.3 | 13.6 | 5.9 | 31.4 | 9.5 | 5.9 | 20.1 |
| 1925.... | 16.0 | 6.5 | 11.8 | 28.4 | 78.7 | 39.6 | 49.7 | 24.3 | 124.3 | 43.2 | 50.9 | 1.2 |
| 1926.... | 46.7 | 32.0 | 24.9 | 152.7 | 160.4 | 226.6 | 136.1 | 156.8 | 153.3 | 37.9 | 9.5 | 60.4 |
| 1927.... | 23.7 | 14.2 | 21.9 | 59.3 | 7.1 | 34.3 | 36.1 | 5.3 | 36.1 | 40.8 | 16.6 | 37.3 |
| 1928.... | 10.7 | 27.8 | 13.6 | 23.1 | 43.8 | 75.1 | 16.0 | 29.0 | 95.9 | 52.7 | 7.7 | 11.2 |
| 1929.... | 39.6 | 172.8 | 163.3 | 47.3 | 130.8 | 61.5 | 74.6 | 42.6 | | | | |

TABLE 17A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE METAL-MANUFACTURING INDUSTRY* AND FOR SIX SKILLED METAL OCCUPATIONS AND MACHINE OPERATORS

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Skilled Metal Occupations | | | | | | | | | | | | |
| 1923.... | | | | 238.7 | 244.0 | 179.7 | 164.0 | 84.5 | 103.5 | 78.8 | 59.2 | 27.8 |
| 1924.... | 40.8 | 32.1 | 51.1 | 40.8 | 33.6 | 20.7 | 28.6 | 26.7 | 50.3 | 25.5 | 34.4 | 19.7 |
| 1925.... | 26.9 | 31.5 | 48.2 | 47.8 | 59.5 | 72.3 | 73.2 | 48.7 | 104.9 | 72.8 | 48.3 | 38.3 |
| 1926.... | 53.6 | 66.2 | 171.3 | 173.3 | 150.4 | 122.4 | 89.7 | 129.8 | 100.6 | 67.4 | 48.6 | 26.7 |
| 1927.... | 31.0 | 27.9 | 33.2 | 45.4 | 26.2 | 40.6 | 25.0 | 32.9 | 42.7 | 30.6 | 31.1 | 19.6 |
| 1928.... | 21.6 | 30.1 | 24.8 | 78.9 | 36.6 | 46.7 | 44.3 | 38.2 | 65.0 | 90.5 | 63.5 | 52.2 |
| 1929.... | 72.7 | 52.2 | 82.4 | 97.5 | 89.5 | 87.8 | 70.7 | 100.2 | | | | |
| Machine Operators and Specialized | | | | | | | | | | | | |
| 1923.... | | | | 122.1 | 227.8 | 114.7 | 96.7 | 67.8 | 74.5 | 143.1 | 46.3 | 53.6 |
| 1924.... | 61.9 | 68.7 | 52.8 | 37.2 | 29.5 | 25.6 | 23.8 | 28.4 | 45.2 | 83.6 | 77.1 | 49.0 |
| 1925.... | 65.3 | 56.0 | 75.4 | 80.2 | 83.8 | 86.3 | 71.8 | 66.0 | 104.9 | 145.7 | 107.4 | 48.1 |
| 1926.... | 66.6 | 80.4 | 144.0 | 109.5 | 128.1 | 74.7 | 63.8 | 93.2 | 134.3 | 138.3 | 130.9 | 36.3 |
| 1927.... | 26.9 | 54.1 | 59.3 | 79.6 | 57.7 | 43.0 | 30.3 | 49.1 | 59.6 | 35.7 | 43.5 | 20.5 |
| 1928.... | 22.3 | 30.0 | 28.0 | 31.0 | 23.5 | 32.7 | 30.9 | 45.4 | 52.4 | 50.4 | 24.9 | 32.6 |
| 1929.... | 73.9 | 52.5 | 68.3 | 65.8 | 121.8 | 120.2 | 56.4 | 45.5 | | | | |

* For Metal-manufacturing Industry, Including Automobile Manufacture see 13A, page 93.

MOVING AVERAGE OF INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
BY THE METAL-MANUFACTURING INDUSTRY AND FOR SIX SKILLED METAL OCCU-
PATIONS AND MACHINE OPERATORS

(Base-Average of 1926)

[illegible]

APPENDIX

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TABLE 19A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING* BY AND ENTRANCES
INTO THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE
MANUFACTURE

PHILADELPHIA

(Base-Average of 1926)

Entrances

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1923.... | | | | 151.4 | 158.3 | 149.1 | 140.4 | 93.5 | 101.2 | 123.9 | 78.8 | 52.9 |
| 1924.... | 68.2 | 56.6 | 55.7 | 59.3 | 32.8 | 35.5 | 41.5 | 58.2 | 58.5 | 87.2 | 58.7 | 49.9 |
| 1925.... | 70.2 | 46.6 | 74.6 | 80.9 | 79.9 | 95.5 | 81.8 | 90.1 | 72.0 | 90.7 | 63.8 | 53.5 |
| 1926.... | 93.0 | 99.5 | 113.8 | 106.4 | 89.0 | 100.9 | 116.2 | 156.4 | 111.4 | 83.4 | 74.1 | 55.9 |
| 1927.... | 60.7 | 73.8 | 76.2 | 63.6 | 73.4 | 75.7 | 59.6 | 57.5 | 59.7 | 47.0 | 76.6 | 64.1 |
| 1928.... | 89.2 | 54.6 | 46.9 | 61.3 | 60.3 | 79.2 | 79.0 | 102.8 | 74.7 | 55.7 | 64.7 | 80.7 |
| 1929.... | 115.2 | 29.2 | 38.5 | 115.1 | 95.9 | 102.9 | | | | | | |

* For Help-wanted Advertising see 13A, page 93.

TABLE 20A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING* BY AND TURNOVER
IN THE METAL-MANUFACTURING INDUSTRY, INCLUDING AUTOMOBILE MANUFACTURE

PHILADELPHIA

(Base-Average of 1926)

Turnover

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1923.... | | | | 146.9 | 141.5 | 141.2 | 130.2 | 118.5 | 104.3 | 107.2 | 91.1 | 64.3 |
| 1924.... | 70.5 | 66.7 | 71.2 | 113.7 | 80.0 | 73.7 | 52.7 | 45.0 | 57.8 | 68.0 | 56.1 | 55.1 |
| 1925.... | 57.6 | 58.3 | 62.1 | 74.8 | 74.2 | 77.9 | 78.6 | 77.6 | 81.5 | 79.6 | 113.6 | 81.3 |
| 1926.... | 76.8 | 75.5 | 101.7 | 123.7 | 110.5 | 105.0 | 91.5 | 113.2 | 80.7 | 134.1 | 106.4 | 80.8 |
| 1927.... | 59.1 | 59.4 | 89.4 | 95.3 | 92.0 | 101.5 | 62.5 | 61.2 | 77.9 | 97.2 | 66.0 | 46.9 |
| 1928.... | 52.6 | 60.3 | 79.6 | 52.8 | 58.7 | 59.2 | 49.7 | 64.4 | 67.5 | 72.4 | 65.4 | 86.3 |
| 1929.... | 61.9 | 68.7 | 70.5 | 87.4 | 102.5 | 80.2 | | | | | | |

* For Help-wanted Advertising see 13A, page 93.

HELP-WANTED ADVERTISING

TABLE 21A

MOVING AVERAGE OF INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING
BY AND OF ENTRANCES AND TURNOVER IN THE METAL-MANUFACTURING INDUSTRY
INCLUDING AUTOMOBILE MANUFACTURE

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-------------------------|------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|
| Help-wanted Advertising | | | | | | | | | | | | |
| 1923.... | | | | | | | | | | 88.1 | 76.8 | 65.7 |
| 1924.... | 57.8 | 50.8 | 47.1 | 44.3 | 40.2 | 40.4 | 40.7 | 40.6 | 41.9 | 42.7 | 43.8 | 45.9 |
| 1925.... | 49.4 | 51.9 | 53.5 | 50.3 | 61.8 | 63.3 | 64.4 | 66.6 | 67.7 | 75.7 | 83.1 | 90.9 |
| 1926.... | 95.2 | 98.9 | 106.4 | 103.1 | 101.7 | 100.4 | 100.0 | 99.2 | 98.3 | 89.9 | 83.9 | 75.8 |
| 1927.... | 69.8 | 65.5 | 58.1 | 56.7 | 55.0 | 53.9 | 52.3 | 49.4 | 47.8 | 46.2 | 45.3 | 44.9 |
| 1928.... | 46.4 | 45.9 | 46.0 | 47.5 | 50.5 | 51.6 | 53.2 | 56.3 | 56.6 | 58.7 | 60.5 | 61.8 |
| 1929.... | 61.6 | 62.0 | 63.8 | | | | | | | | | |
| Entrances | | | | | | | | | | | | |
| 1923.... | | | | | | | | | | 102.5 | 94.8 | 84.4 |
| 1924.... | 74.0 | 66.7 | 63.7 | 60.2 | 57.1 | 55.4 | 55.2 | 55.3 | 54.5 | 56.1 | 57.9 | 61.8 |
| 1925.... | 66.8 | 70.2 | 72.8 | 73.9 | 75.0 | 75.4 | 75.7 | 77.6 | 82.0 | 85.3 | 87.4 | 88.2 |
| 1926.... | 88.6 | 91.5 | 97.0 | 100.3 | 98.9 | 90.8 | 100.0 | 97.3 | 95.2 | 92.0 | 88.5 | 87.2 |
| 1927.... | 85.1 | 80.3 | 72.1 | 67.8 | 64.8 | 65.0 | 65.7 | 68.0 | 66.4 | 64.0 | 63.8 | 62.7 |
| 1928.... | 63.0 | 64.6 | 68.4 | 69.6 | 70.4 | 69.4 | 70.8 | 72.9 | 70.8 | 70.1 | 74.6 | 77.6 |
| 1929.... | 79.5 | | | | | | | | | | | |
| Turnover | | | | | | | | | | | | |
| 1923.... | | | | | | | | | | 104.5 | 101.7 | 96.6 |
| 1924.... | 90.0 | 84.5 | 78.4 | 74.5 | 71.2 | 68.3 | 67.5 | 66.5 | 65.8 | 65.0 | 61.8 | 61.3 |
| 1925.... | 61.6 | 63.8 | 66.5 | 68.5 | 69.4 | 74.2 | 76.4 | 78.0 | 79.5 | 82.8 | 86.8 | 89.9 |
| 1926.... | 92.1 | 93.2 | 96.2 | 96.1 | 100.6 | 100.0 | 100.0 | 98.5 | 97.2 | 96.1 | 93.8 | 92.2 |
| 1927.... | 91.0 | 89.5 | 85.2 | 85.0 | 81.0 | 78.5 | 75.7 | 75.2 | 75.2 | 74.4 | 70.9 | 68.1 |
| 1928.... | 64.6 | 63.5 | 63.8 | 62.9 | 60.8 | 60.8 | 64.1 | 64.8 | 65.5 | 64.8 | 67.7 | 71.3 |
| 1929.... | 73.1 | | | | | | | | | | | |

TABLE 22A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE TEXTILE
INDUSTRY AND ALL INDUSTRIES*

PHILADELPHIA

(Base-Average of 1926)

Textiles

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1923.... | | | | 176.0 | 229.7 | 131.4 | 83.2 | 67.8 | 149.7 | 140.1 | 116.3 | 69.6 |
| 1924.... | 104.1 | 140.0 | 80.6 | 76.4 | 57.8 | 28.9 | 33.5 | 53.1 | 76.8 | 154.1 | 139.2 | 168.1 |
| 1925.... | 126.9 | 140.3 | 165.9 | 135.7 | 124.2 | 130.4 | 137.9 | 107.1 | 186.8 | 152.7 | 98.4 | 82.4 |
| 1926.... | 74.9 | 51.8 | 117.7 | 86.2 | 98.8 | 90.7 | 93.4 | 133.2 | 115.9 | 150.0 | 123.7 | 63.6 |
| 1927.... | 84.8 | 91.8 | 84.6 | 131.2 | 86.5 | 56.0 | 54.1 | 55.3 | 93.3 | 74.7 | 74.0 | 35.9 |
| 1928.... | 48.2 | 52.0 | 40.7 | 42.0 | 57.8 | 44.6 | 47.8 | 60.5 | 108.8 | 84.3 | 80.4 | 60.6 |
| 1929.... | 84.4 | 113.4 | 111.9 | 78.8 | 77.3 | 66.2 | 46.6 | 62.3 | | | | |

* For All Industries see 1A, Philadelphia, page 85.

TABLE 23A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING* BY AND
OF EMPLOYMENT IN THE TEXTILE INDUSTRY

PHILADELPHIA

(Base-Average of 1926)

Employment

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1923.... | 114.9 | 116.3 | 116.9 | 116.2 | 116.0 | 114.7 | 113.0 | 110.4 | 110.0 | 110.9 | 109.1 | 109.7 |
| 1924.... | 105.8 | 106.1 | 107.1 | 102.3 | 97.7 | 88.8 | 84.9 | 88.6 | 94.9 | 101.4 | 101.9 | 103.8 |
| 1925.... | 104.7 | 106.2 | 106.7 | 104.0 | 104.4 | 102.9 | 100.9 | 101.5 | 102.2 | 102.2 | 102.8 | 102.7 |
| 1926.... | 101.1 | 101.9 | 101.4 | 97.8 | 96.8 | 96.1 | 95.1 | 96.3 | 99.0 | 103.4 | 105.0 | 105.7 |
| 1927.... | 105.9 | 107.0 | 107.5 | 105.2 | 104.4 | 102.4 | 98.9 | 99.3 | 98.2 | 103.7 | 104.8 | 102.8 |
| 1928.... | 101.3 | 103.4 | 102.2 | 97.2 | 97.4 | 97.3 | 96.1 | 95.4 | 95.1 | 97.7 | 99.6 | 100.2 |
| 1929.... | | | | | | | | | | | | |

* For Advertising by Textile Industry see 22A, page 98.

TABLE 24A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE TEXTILE
INDUSTRY* AND BY THE HOSIERY AND KNIT-GOODS INDUSTRY

PHILADELPHIA

(Base-Average of 1926)

Hosiery and Knit Goods

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1923.... | | | | 187.3 | 209.9 | 128.5 | 94.5 | 84.5 | 98.9 | 119.5 | 135.6 | 75.9 |
| 1924.... | 154.1 | 165.2 | 120.8 | 121.3 | 82.1 | 46.7 | 45.4 | 62.1 | 95.9 | 134.4 | 143.5 | 168.0 |
| 1925.... | 136.7 | 189.5 | 225.3 | 186.6 | 163.4 | 173.7 | 140.0 | 128.3 | 210.0 | 160.3 | 116.5 | 64.3 |
| 1926.... | 76.0 | 51.4 | 114.0 | 102.3 | 105.4 | 87.5 | 100.0 | 122.7 | 110.7 | 147.1 | 119.0 | 63.6 |
| 1927.... | 70.8 | 106.2 | 98.1 | 165.6 | 84.3 | 58.3 | 61.8 | 44.8 | 126.3 | 110.4 | 101.2 | 42.5 |
| 1928.... | 58.2 | 75.5 | 55.9 | 56.7 | 68.1 | 55.2 | 48.5 | 64.2 | 127.5 | 109.8 | 121.3 | 66.3 |
| 1929.... | 99.5 | 101.2 | 137.4 | 87.0 | 81.5 | 87.0 | 62.6 | 65.9 | | | | |

* For Textile Industry see 22A, page 98.

HELP-WANTED ADVERTISING

TABLE 25A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE TEXTILE INDUSTRY, EXCLUSIVE OF HOSIERY AND KNIT GOODS, AND FOR WEAVERS

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Other Textiles (Other than hosiery and knit goods) | | | | | | | | | | | | |
| 1923.... | | | | 160.6 | 256.4 | 135.2 | 67.9 | 45.2 | 218.3 | 168.0 | 90.3 | 61.1 |
| 1924.... | 36.5 | 106.0 | 47.5 | 15.8 | 24.9 | 4.8 | 17.4 | 40.9 | 50.9 | 180.6 | 133.4 | 168.3 |
| 1925.... | 113.7 | 73.8 | 85.6 | 66.9 | 71.1 | 71.7 | 135.1 | 78.4 | 155.4 | 142.3 | 73.8 | 106.9 |
| 1926.... | 73.5 | 52.3 | 122.8 | 64.5 | 95.0 | 95.2 | 84.5 | 147.3 | 122.8 | 154.0 | 130.0 | 63.7 |
| 1927.... | 103.6 | 72.4 | 66.4 | 84.8 | 89.3 | 54.9 | 43.6 | 69.5 | 48.8 | 26.5 | 39.4 | 26.8 |
| 1928.... | 34.7 | 20.2 | 20.0 | 22.0 | 43.8 | 30.2 | 46.8 | 55.6 | 83.5 | 49.9 | 25.4 | 53.0 |
| 1929.... | 64.0 | 129.9 | 77.4 | 67.7 | 71.6 | 38.1 | 24.9 | 57.4 | | | | |
| Weavers | | | | | | | | | | | | |
| 1923.... | | | | 351.0 | 271.4 | 338.8 | 135.4 | 17.0 | 61.2 | 313.6 | 48.3 | 66.0 |
| 1924.... | 87.8 | 275.5 | 59.2 | 2.0 | 11.6 | 3.4 | 10.2 | 17.7 | 49.0 | 389.8 | 229.3 | 282.3 |
| 1925.... | 38.8 | 16.3 | 55.1 | 45.6 | 67.3 | 38.1 | 205.4 | 110.0 | 152.4 | 113.6 | 87.7 | 59.2 |
| 1926.... | 26.5 | 9.5 | 8.8 | 2.0 | 19.7 | 39.5 | 132.0 | 205.4 | 166.0 | 359.2 | 198.6 | 32.7 |
| 1927.... | 48.3 | 38.8 | 19.0 | 8.8 | 164.6 | 51.7 | 50.3 | 30.6 | 49.7 | 54.4 | 25.2 | 51.7 |
| 1928.... | 32.7 | 2.0 | 18.4 | 0.0 | 87.8 | 22.4 | 2.0 | 4.1 | 22.4 | 69.4 | 12.2 | 29.3 |
| 1929.... | 45.6 | 131.3 | 6.1 | 12.9 | 22.4 | 24.5 | 10.2 | 34.7 | | | | |

TABLE 26A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY THE HOSIERY AND KNIT-GOODS INDUSTRY* AND FOR KNITTERS AND FOR LOOPERS AND TOPPERS

PHILADELPHIA

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Knitters | | | | | | | | | | | | |
| 1923.... | | | | 210.5 | 112.2 | 140.2 | 113.1 | 108.3 | 196.1 | 159.0 | 169.4 | 49.3 |
| 1924.... | 119.2 | 173.4 | 61.6 | 73.4 | 35.8 | 39.3 | 41.9 | 41.5 | 79.9 | 153.3 | 88.2 | 63.8 |
| 1925.... | 116.2 | 122.7 | 100.0 | 71.6 | 96.5 | 86.0 | 87.3 | 74.7 | 155.0 | 155.9 | 41.0 | 40.2 |
| 1926.... | 51.5 | 31.0 | 89.1 | 132.3 | 218.3 | 38.4 | 66.8 | 91.7 | 179.9 | 155.5 | 92.6 | 54.1 |
| 1927.... | 57.6 | 76.0 | 60.3 | 78.6 | 21.0 | 21.8 | 22.3 | 22.3 | 61.6 | 59.0 | 53.3 | 20.5 |
| 1928.... | 30.6 | 84.7 | 16.2 | 19.2 | 17.5 | 32.8 | 21.0 | 14.8 | 64.6 | 49.8 | 29.3 | 26.6 |
| 1929.... | 56.3 | 35.8 | 42.4 | 20.5 | 12.7 | 26.2 | 39.7 | 35.8 | | | | |
| Loopers and Toppers | | | | | | | | | | | | |
| 1923.... | | | | 250.0 | 270.9 | 199.1 | 183.6 | 101.8 | 125.5 | 66.4 | 152.7 | 76.4 |
| 1924.... | 205.5 | 159.1 | 146.4 | 217.3 | 145.5 | 11.8 | 11.8 | 23.6 | 51.8 | 80.0 | 144.2 | 168.2 |
| 1925.... | 237.3 | 353.6 | 389.1 | 450.9 | 285.5 | 378.2 | 327.3 | 220.0 | 118.2 | 110.0 | 177.3 | 52.7 |
| 1926.... | 54.5 | 39.1 | 111.8 | 113.6 | 92.7 | 164.5 | 119.1 | 120.9 | 130.9 | 101.8 | 113.6 | 32.7 |
| 1927.... | 30.9 | 67.3 | 71.8 | 42.7 | 59.1 | 13.6 | 24.5 | 35.5 | 58.2 | 33.6 | 74.5 | 34.5 |
| 1928.... | 33.6 | 76.4 | 30.0 | 38.2 | 20.0 | 49.1 | 80.0 | 77.3 | 75.5 | 100.0 | 140.9 | 192.7 |
| 1929.... | 170.0 | 241.8 | 120.0 | 80.0 | 100.0 | 102.7 | 121.8 | 85.5 | | | | |

* For Hosiery and Knit Goods see 24A, page 99.

TABLE 27A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY* AND OF EMPLOYMENT IN THE HOSIERY AND KNIT-GOODS INDUSTRY

PHILADELPHIA

(Base-Average of 1926)

Employment

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1923.... | 84.5 | 86.5 | 89.3 | 91.4 | 91.5 | 92.6 | 90.8 | 88.1 | 87.9 | 87.8 | 88.6 | 88.9 |
| 1924.... | 90.6 | 92.0 | 97.3 | 93.7 | 91.5 | 86.3 | 83.4 | 80.0 | 84.7 | 89.5 | 92.4 | 93.5 |
| 1925.... | 92.7 | 98.0 | 102.7 | 105.0 | 107.3 | 103.2 | 103.5 | 102.7 | 102.5 | 105.4 | 101.6 | 102.2 |
| 1926.... | 98.8 | 99.3 | 101.0 | 100.3 | 100.0 | 98.7 | 96.5 | 94.6 | 96.3 | 103.9 | 104.7 | 106.3 |
| 1927.... | 98.0 | 98.7 | 98.9 | 99.2 | 101.7 | 97.2 | 87.2 | 88.3 | 89.8 | 95.4 | 98.2 | 99.4 |
| 1928.... | 96.4 | 98.0 | 99.8 | 96.8 | 95.7 | 95.3 | 92.2 | 88.6 | | | | |

* For Advertising by Hosiery and Knit-Goods Industry see 24A, page 99.

TABLE 28A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING FOR COMMON LABOR AND FOR ALL OCCUPATIONS*

PHILADELPHIA

(Base-Average of 1926)

Common Laborers

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1923.... | | | | 426.2 | 408.9 | 299.3 | 156.2 | 125.1 | 135.3 | 126.3 | 90.3 | 33.9 |
| 1924.... | 54.0 | 53.1 | 74.8 | 85.1 | 65.5 | 36.3 | 36.3 | 33.5 | 35.2 | 62.7 | 50.0 | 33.8 |
| 1925.... | 34.2 | 48.4 | 62.4 | 107.9 | 87.5 | 103.3 | 70.0 | 65.9 | 187.1 | 95.7 | 107.1 | 38.2 |
| 1926.... | 31.3 | 36.7 | 143.0 | 143.9 | 189.9 | 103.3 | 85.3 | 141.3 | 123.9 | 81.5 | 83.2 | 31.2 |
| 1927.... | 35.6 | 41.7 | 56.1 | 66.7 | 66.1 | 45.5 | 41.9 | 27.9 | 52.1 | 31.1 | 27.8 | 18.9 |
| 1928.... | 18.7 | 17.1 | 17.4 | 33.4 | 33.3 | 23.8 | 28.4 | 34.1 | 39.2 | 30.6 | 36.7 | 17.9 |
| 1929.... | 16.1 | 20.4 | 14.8 | 30.5 | 44.2 | 41.5 | 18.3 | 27.5 | | | | |

* For All Occupations see 1A, Philadelphia, page 85.

TABLE 29A

INDICES OF NUMBER OF LINES OF HELP-WANTED ADVERTISING BY EMPLOYMENT BUREAUS AND BY ALL AGENCIES*

PHILADELPHIA

(Base-Average of 1926)

Employment Bureaus

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1923.... | | | | 67.1 | 44.3 | 95.4 | 84.0 | 62.8 | 50.0 | 61.7 | 47.5 | 79.2 |
| 1924.... | 69.4 | 75.3 | 96.7 | 97.8 | 76.0 | 86.3 | 83.3 | 64.1 | 97.8 | 47.9 | 70.8 | 80.9 |
| 1925.... | 100.0 | 126.2 | 133.2 | 104.6 | 100.4 | 105.1 | 99.2 | 81.7 | 98.7 | 131.9 | 104.6 | 71.3 |
| 1926.... | 92.1 | 93.2 | 98.3 | 129.9 | 118.6 | 99.0 | 83.8 | 97.9 | 132.5 | 104.7 | 75.8 | 74.3 |
| 1927.... | 96.6 | 104.6 | 129.7 | 128.5 | 138.6 | 118.5 | 116.3 | 115.2 | 103.2 | 84.5 | 110.0 | 120.8 |
| 1928.... | 90.6 | 72.7 | 86.7 | 93.4 | 182.9 | 128.9 | 112.2 | 91.3 | 104.4 | 141.5 | 90.5 | 112.8 |
| 1929.... | 121.7 | 154.0 | 149.1 | 186.1 | 193.5 | 185.8 | 148.9 | 186.4 | | | | |

* For All Agencies see 1A, Philadelphia, page 85.

TABLE 30A

INDICES OF NUMBER OF ADVERTISEMENTS FOR HELP WANTED
AND FOR SITUATIONS WANTED

NEW YORK *World*

(Base-Average of 1926)

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Help Wanted | | | | | | | | | | | | |
| 1922.... | 69.3 | 70.5 | 75.4 | 81.1 | 85.2 | 88.6 | 77.1 | 93.8 | 122.5 | 132.3 | 95.2 | 69.0 |
| 1923.... | 103.6 | 112.4 | 130.9 | 145.3 | 135.1 | 127.0 | 96.8 | 104.6 | 92.2 | 121.4 | 77.7 | 56.9 |
| 1924.... | 78.0 | 77.3 | 93.3 | 95.0 | 81.2 | 71.3 | 58.8 | 76.0 | 114.2 | 96.4 | 71.8 | 57.9 |
| 1925.... | 74.3 | 80.7 | 93.8 | 85.7 | 76.4 | 84.8 | 72.3 | 92.4 | 126.0 | 124.3 | 97.8 | 69.6 |
| 1926.... | 88.1 | 88.6 | 105.7 | 97.5 | 96.9 | 89.8 | 78.9 | 109.3 | 148.8 | 137.1 | 93.4 | 62.6 |
| 1927.... | 80.6 | 75.9 | 88.3 | 85.6 | 79.3 | 74.4 | 63.1 | 82.9 | 105.0 | 93.8 | 70.3 | 46.3 |
| 1928.... | 60.4 | 57.9 | 58.8 | 64.5 | 60.1 | 56.2 | 57.8 | 68.0 | 93.5 | 89.4 | 61.2 | 48.3 |
| 1929.... | 66.7 | 63.7 | 73.1 | 74.2 | 65.9 | | | | | | | |
| Situations Wanted | | | | | | | | | | | | |
| 1922.... | 112.6 | 105.5 | 104.7 | 105.0 | 98.2 | 96.8 | 91.5 | 90.9 | 105.2 | 120.5 | 111.8 | 80.9 |
| 1923.... | 116.6 | 102.6 | 97.3 | 106.4 | 100.3 | 94.3 | 99.1 | 93.4 | 67.1 | 123.1 | 129.4 | 96.9 |
| 1924.... | 130.6 | 118.6 | 125.8 | 119.1 | 121.9 | 130.1 | 108.8 | 95.4 | 122.8 | 130.2 | 122.1 | 93.4 |
| 1925.... | 123.6 | 122.2 | 125.6 | 114.5 | 119.3 | 107.4 | 97.2 | 94.1 | 106.5 | 120.3 | 115.8 | 85.7 |
| 1926.... | 129.9 | 112.2 | 113.7 | 114.7 | 109.5 | 99.4 | 78.3 | 81.1 | 91.7 | 107.0 | 97.1 | 72.4 |
| 1927.... | 106.1 | 98.0 | 120.9 | 90.0 | 95.6 | 89.6 | 70.1 | 73.2 | 86.2 | 102.3 | 95.7 | 66.5 |
| 1928.... | 102.2 | 88.0 | 80.1 | 77.9 | 81.0 | 77.5 | 64.6 | 61.2 | 79.6 | 92.7 | 83.2 | 58.6 |
| 1929.... | 75.1 | 74.9 | 68.5 | 68.5 | 64.6 | 65.8 | | | | | | |

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